GCSS-MC
CSSE Advocacy Board

04 December 2003
PM GCSS-MC
Mr. Randy Delarm

Agenda

Introduction

Objectives

Scope

Schedule

Acquisition

System Architecture

Introduction

- Program is on course to provide a material solution
- Strong partnership exists with Functional Advocate
- GCSS-MC remains a key enabler for modernization
- Results are within reach

Objectives

- To provide current information related to in progress activities for Software and Integrator Selection

- To review key information supporting the development of a system architecture

Scope

- **Time** – Block 1 “Lights Out” FY 2006
  - Divest from 5 legacy systems (SASSY, MIMMS, ATLASS, ATLASSII+, PCMIMMS
  - Signals major commitment to proceed with modernization
- **Functions** – Logistics Chain Management
  - *Based on Expeditionary Logistics Architecture*
  - *Partial Log C2 and LDW*
    - Log C2 functions necessary to support Architecture
      - Execution Monitoring
      - Mission Plans from MAGTF
    - LDW to support Joint Information reporting requirements

Scope
(continued)

- Block 1 lays the foundation to provide:
  - Request Management
  - Order Management
  - Capacity Management
  - Production Management
  - Fulfillment and Execution
- Subsequent blocks will add more capability

Execution Structure

GCSS-MC will be executed via new programs and legacy system migration and integration

Logistics Chain Management (LCM)

Planning and execution functions of logistics to primarily support the warfighter in deployed environments.

Implement OA Processes

Logistics Data Warehouse (LDW)

Satisfy the GCSS CRD requirements. It supports Joint Asset Visibility and links to the new COTS products being implemented in the LCM Program.

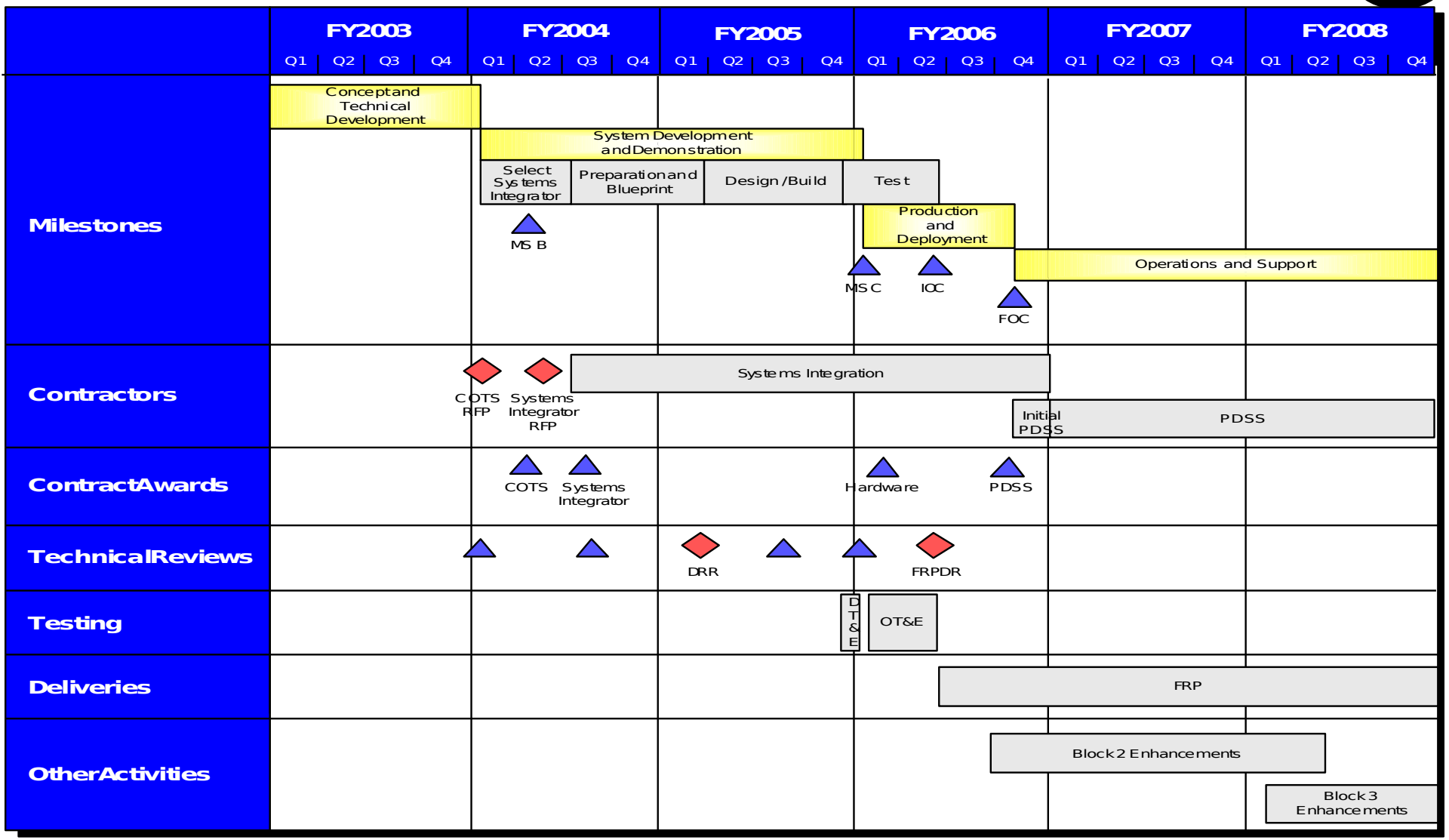
Create the Data ***Share the Data***

Logistics Command and Control (Log C2)

Logistics command and control, specifically including CLC2S versions. Integrates with LCM products and the LDW, and enhancement to meet warfighter needs.

Use the Data

GCSS-MC Master Schedule

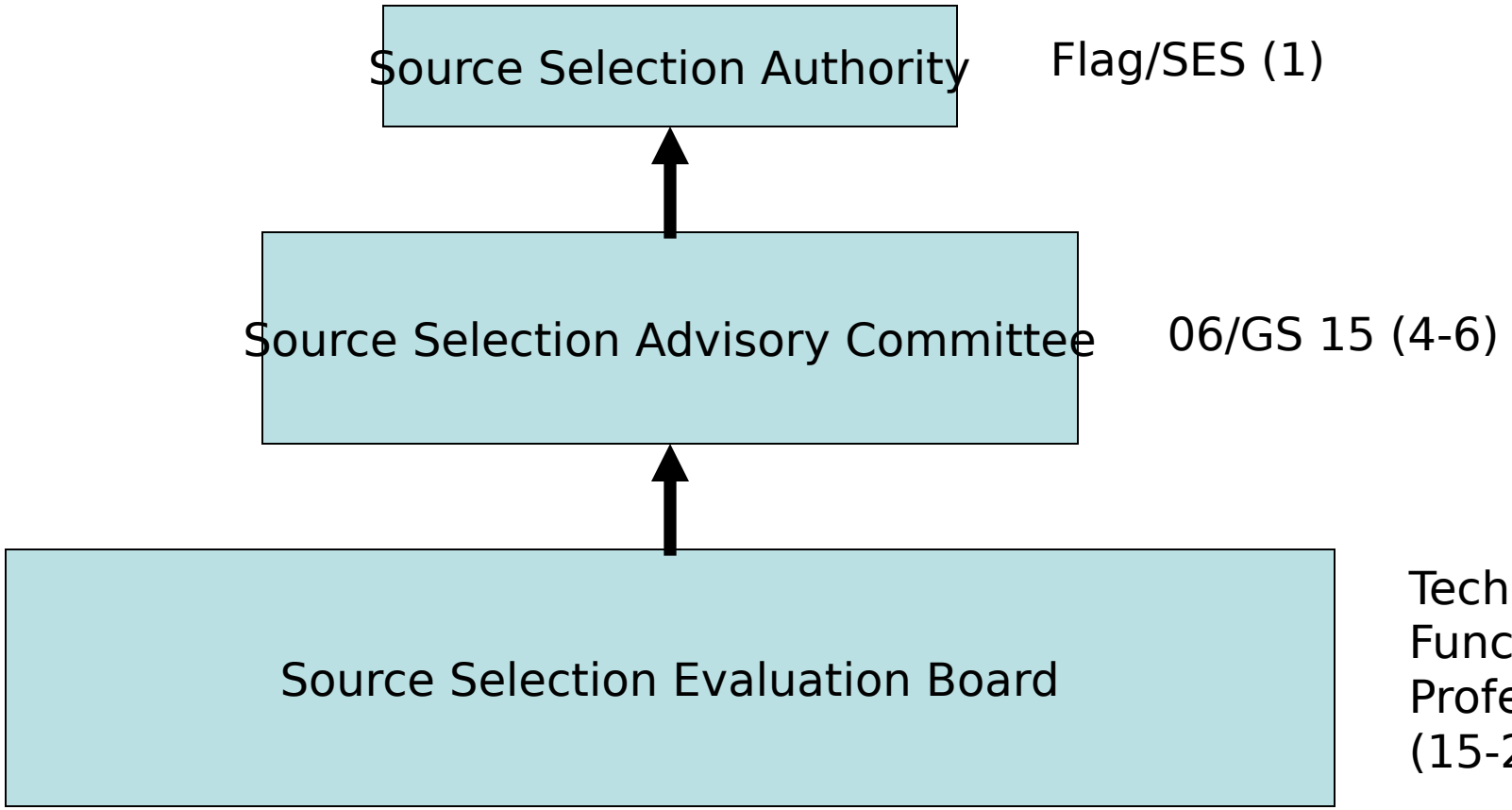


Acquisition

Strategy

- Maintain strong partnership with Functional Advocate during requirements, evaluation, and award
- Use evolutionary acquisition with incremental development (mature COTS software)
- Looking for Best Value solution with strong experience and creativity
- Include demonstration scenarios as criteria for evaluation
- Capitalize on strong Industry Day momentum
- Maintain schedule
- Will select vendor team that satisfies specific Marine Corps criteria

Source Selection Structure



Approach

- Partnership between USMC, COTS supplier and Systems Integrator
- Two Solicitations and Two Awards
  - COTS, Full & Open, FFP, IDIQ, Best Value, 1-year contract with 4, 1-year options
  - Systems Integrator, Full & Open, Best Value, IDIQ, 1-year Incentive Type Contract with 4, 1-year options
- Acquisition Timeline Overlap

Source Selection
COTS Timeline

Draft RFP Release – 11/07/03

Industry Day – 11/7/03

Final RFP Release – 11/14/03

Proposals Due – 1/2/04

Contract Award – 2/27/04

Evaluations will include scripted product demonstrations

Source Selection

Systems Integrator Timeline

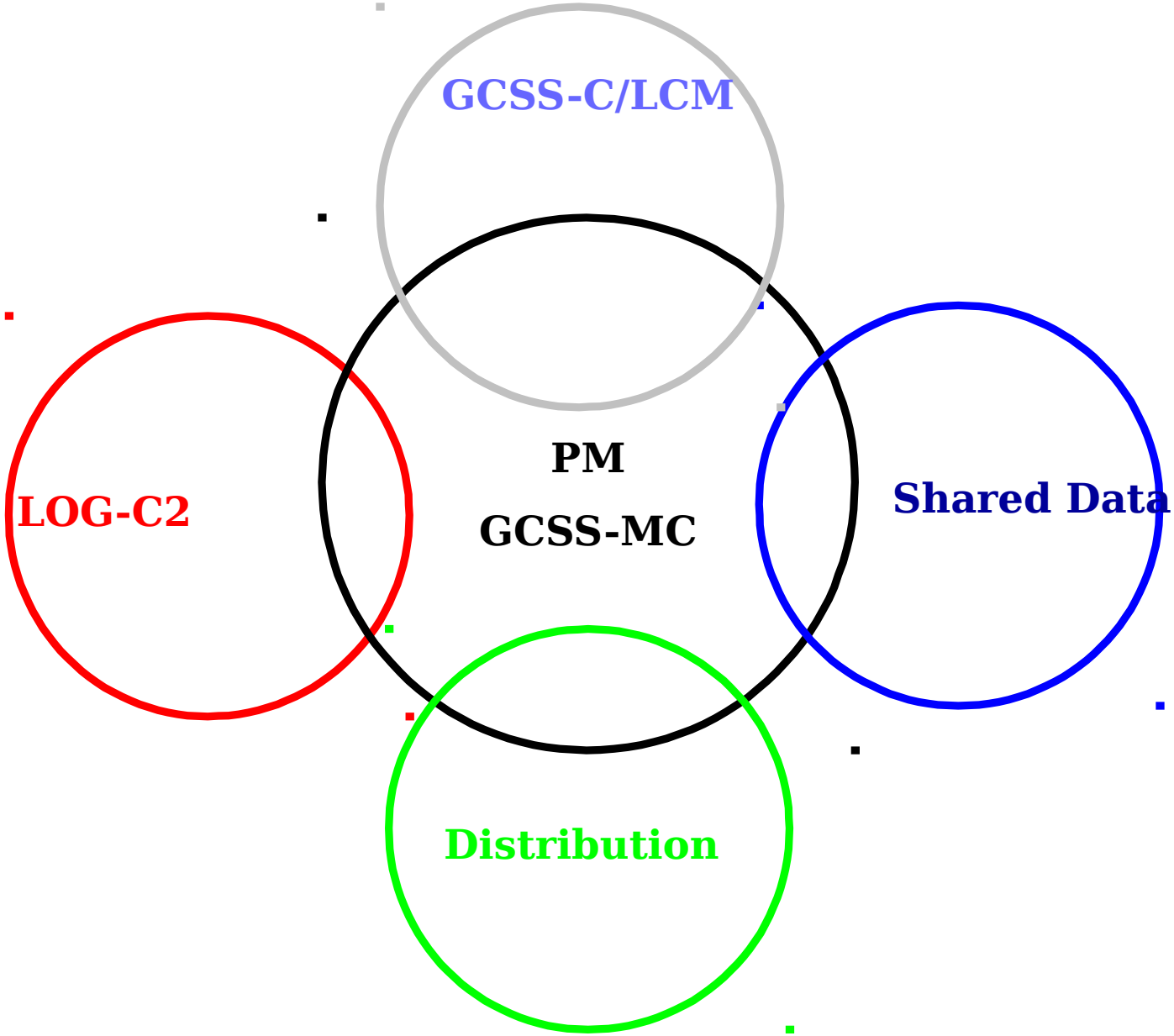
Draft RFP Release – 1/15/04

Final RFP Release – 3/01/04

Proposals Due – 3/22/04

Contract Award – 4/30/04

Team Structure



GCSS-MC
System Architecture

Objective

To provide information regarding the in-progress development of the GCSS-MC System Architecture (SA)

Baseline

GCSS-MC Logistics Chain Management (LCM) Architecture serves as the baseline architecture for all GCSS-MC Programs

Architecture Importance

- **Milestone B (Joint/Acq Requirements/Interoperability)**
  - Embodied in Command, Control, Communications, and Computer Information Support Plan (C4ISP)
- **Support Acquisition of to-be system**
  - Deployed Architecture
  - ***Costs/POM*** -- Determine what needs to be developed/procured within the program and external to the program.
- **Position input to system CONOPS**
  - Develop Information Management Plan
  - Input to Marine Corps Bandwidth Analysis
- **Prove GCSS-MC supports emerging doctrine**
- **Provide Baseline for Compliance:**
  - Global Information Grid – Enterprise Services (GIG-ES)
  - Federal Enterprise Architecture (FEA)
  - Business Enterprise Architecture-Logistics (BEA-LOG)

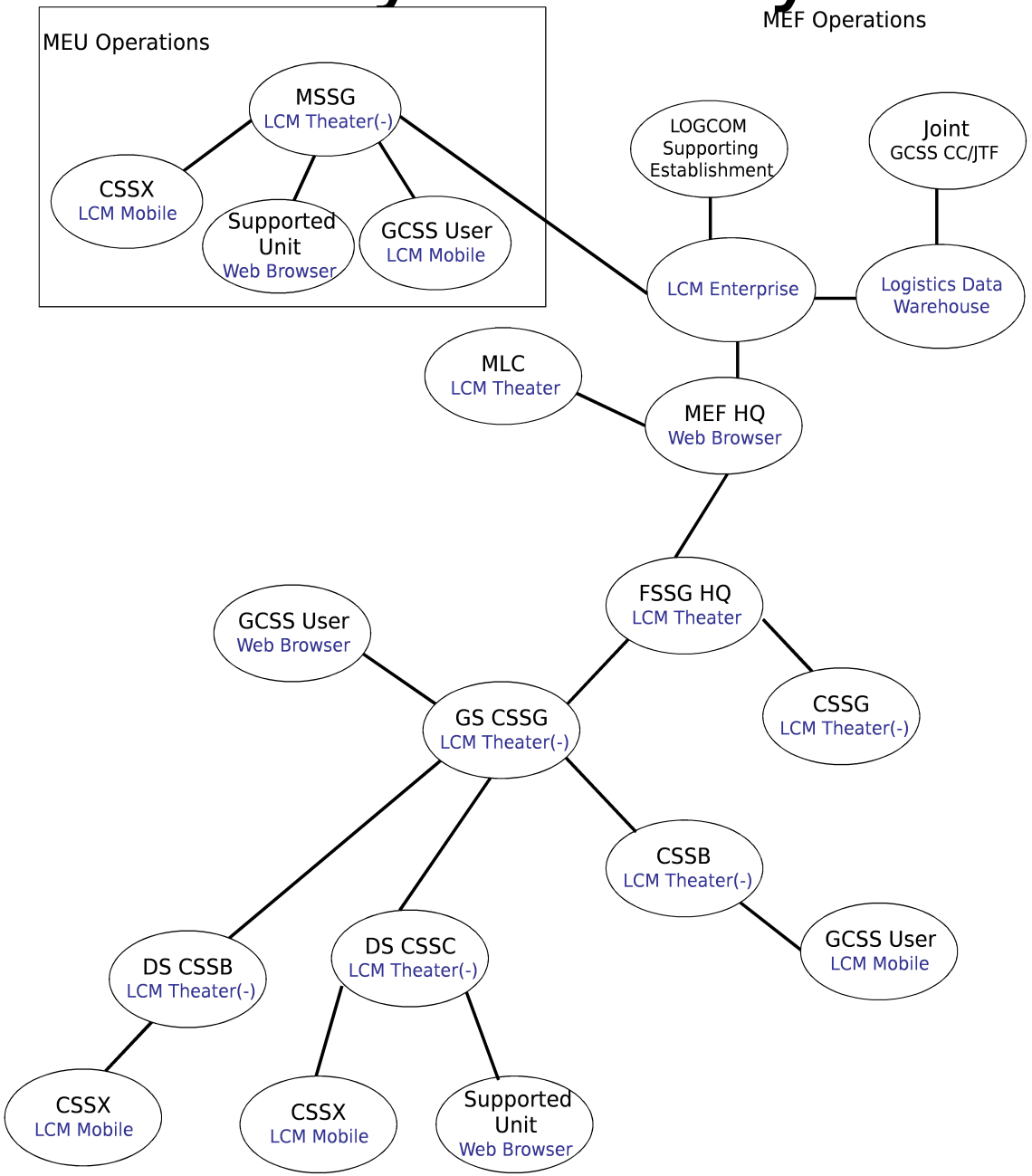
Subtle Terminology Differences

- Supporting Establishment does not include Logistics Command
  - Consists of bases, stations, MCCDC, HQMC, SYSCOM
- Logistics Command
  - Logistics Chain Node
  - Includes Marine Corps Logistics Bases
- Marine Units considered deployed once they receive a warning/deployment order not when they leave CONUS

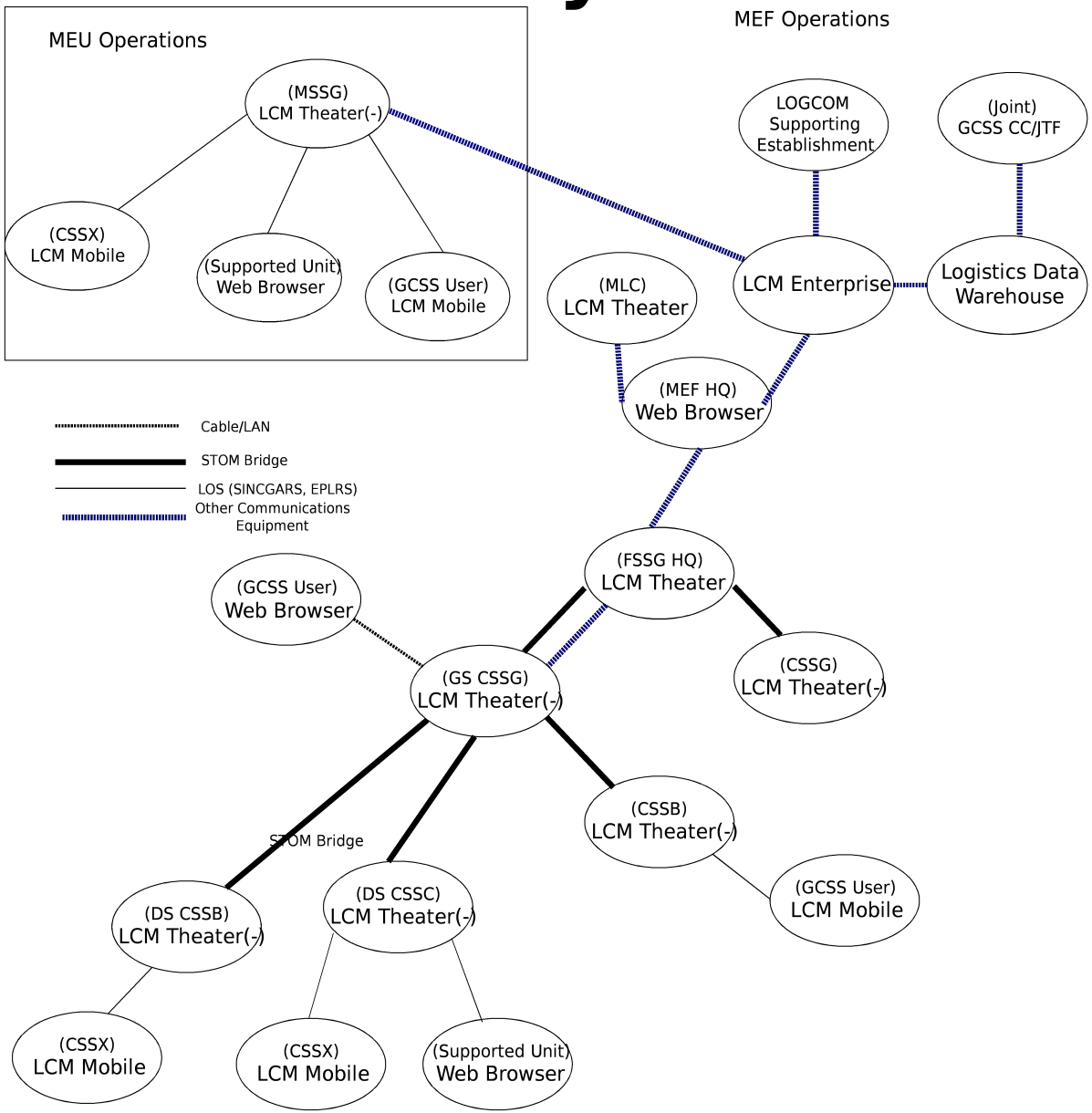
GCSS-MC Vocabulary

- LCM – Logistics Chain Management
- LCM(Enterprise) – Garrison/CONUS GCSS-MC
- LCM Theater and Theater(-) – Deployed GCSS-MC SW and HW
  - Theater → FSSG HQ/MLC
  - Theater(-) → CSSG/CSSB/CSSC/BSSG/MSSG
- LCM Mobile – Deployed extensions of GCSS-MC SW
  - GCSS USER, CSSX
- LDW – Logistics Data Warehouse
- SABI Guard– “Secret and Below Interoperability” Server provides link between SIPRNET and NIPRNET

GCSS-MC System Layout



GCSS-MC System Communications Layout

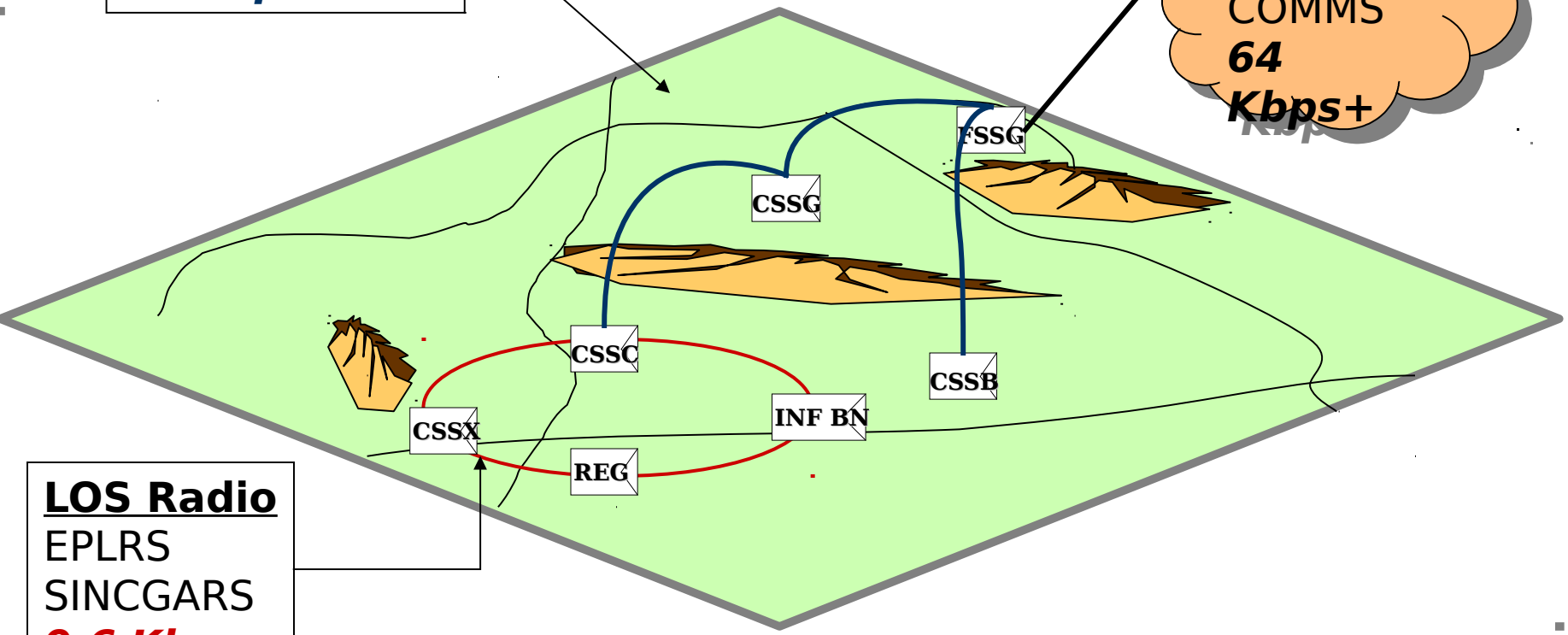


STOM Bridge Concept

To CONUS

STOM Bridge
Commercial Sat
Military Sat
64 Kbps

MEF/JTF
COMMS
64 Kbps+

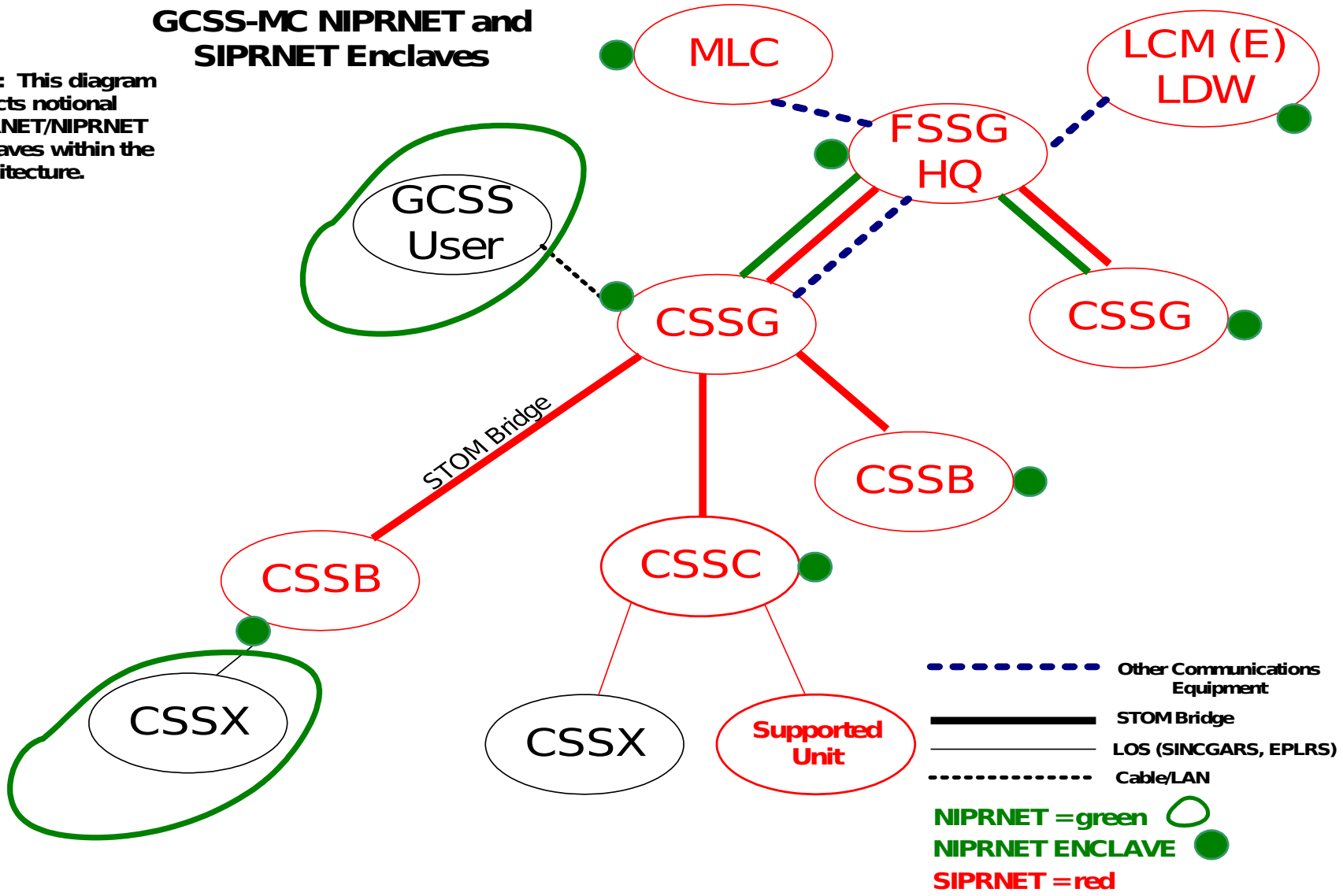


LOS Radio
EPLRS
SINCGARS
9.6 Kbps

NIPRNET/SIPRNET Support

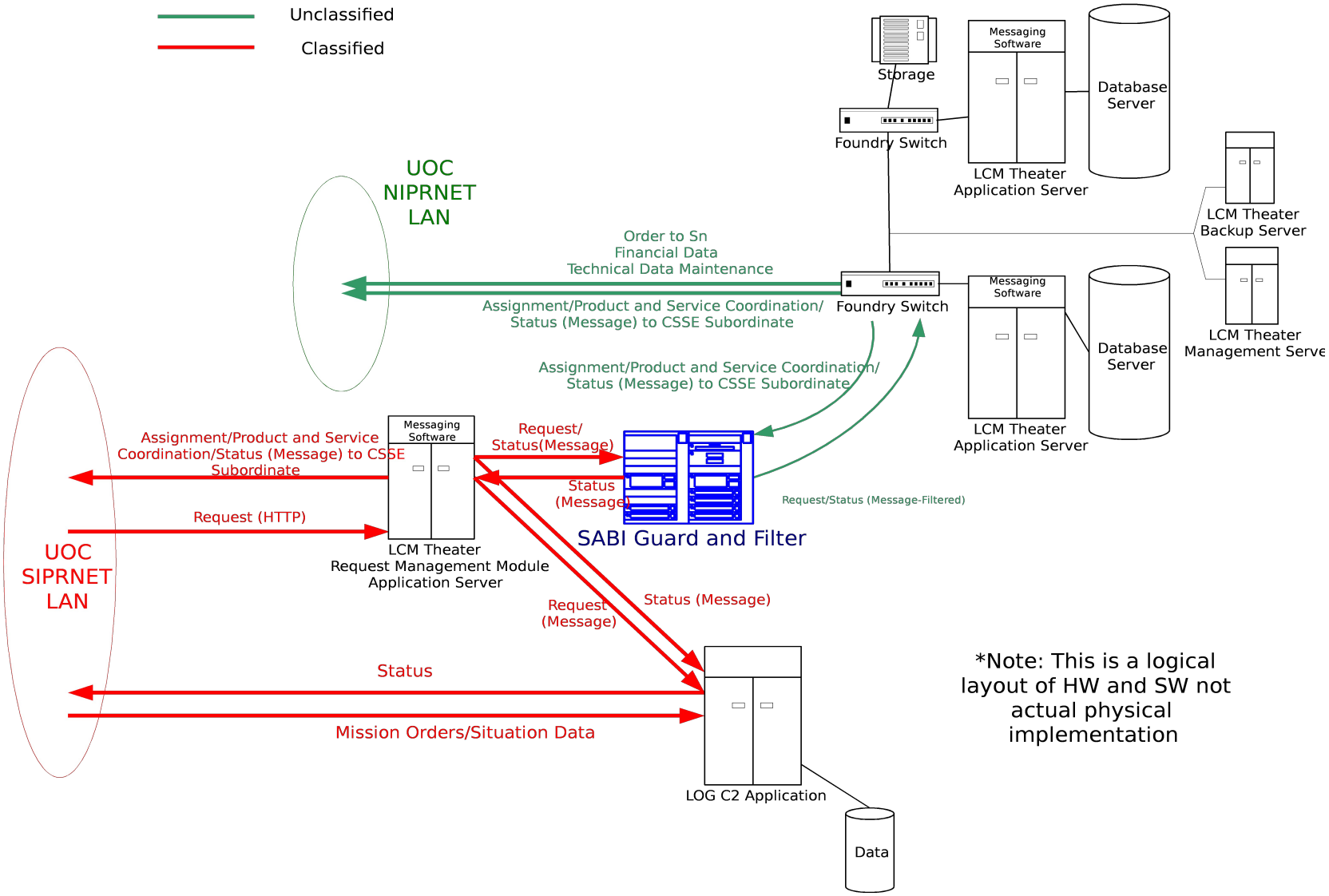
GCSS-MC NIPRNET and SIPRNET Enclaves

Note: This diagram depicts notional SIPRNET/NIPRNET Enclaves within the Architecture.



GCSS-MC LCM Theater

GCSS-MC LCM Theater FSSG HQ/MLC



*Note: This is a logical layout of HW and SW not actual physical implementation

Considerations

- Availability of 2-way guards for NIPR/SIPR Operations
  - Guards in DISA Testing now
  - Currently Garrison Only application of Guards
- Availability of STOM Bridge Capability
  - Support C4I STOM Bridge initiative in POM-06
- Naval Integration
  - Navy ERP Convergence
    - Garrison Oriented
    - Focus for later LCM Blocks
  - Naval Aviation Logistics
    - Some interfaces with Naval Aviation Logistics Systems
    - Process, Data, and Policy requirements for additional interfaces not identified yet

Issues

- GCSS-MC is deployment focused
- Communications technology is new but mature
  - STOM Bridge must be tested and available
  - SABI Guards must be tested and available
- Policy for GCSS-MC implementation is necessary

Excellence in Logistics
Supporting…

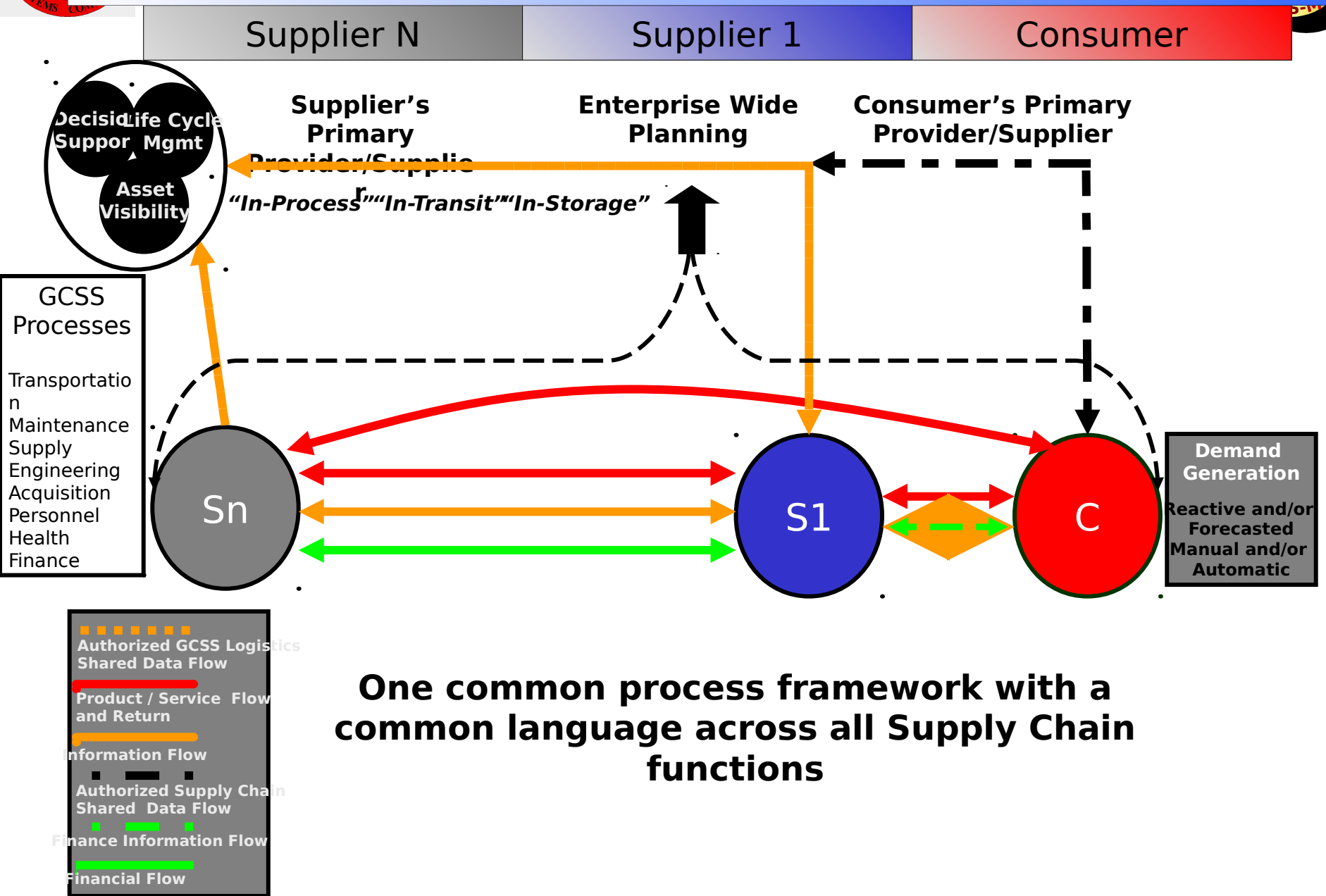
Excellence in Warfighting

BACKUP

Source Architectures

- Marine Corps Expeditionary Logistics Architecture
- GCSS-MC ORD
- GCSS-MC System/Sub-System Specification
- Common Logistics Command and Control System (CLC2S) C4ISP
- Marine Corps Integrated Architecture Picture (MCIAP)
- Combat Operations Centers C4ISP (UOC)

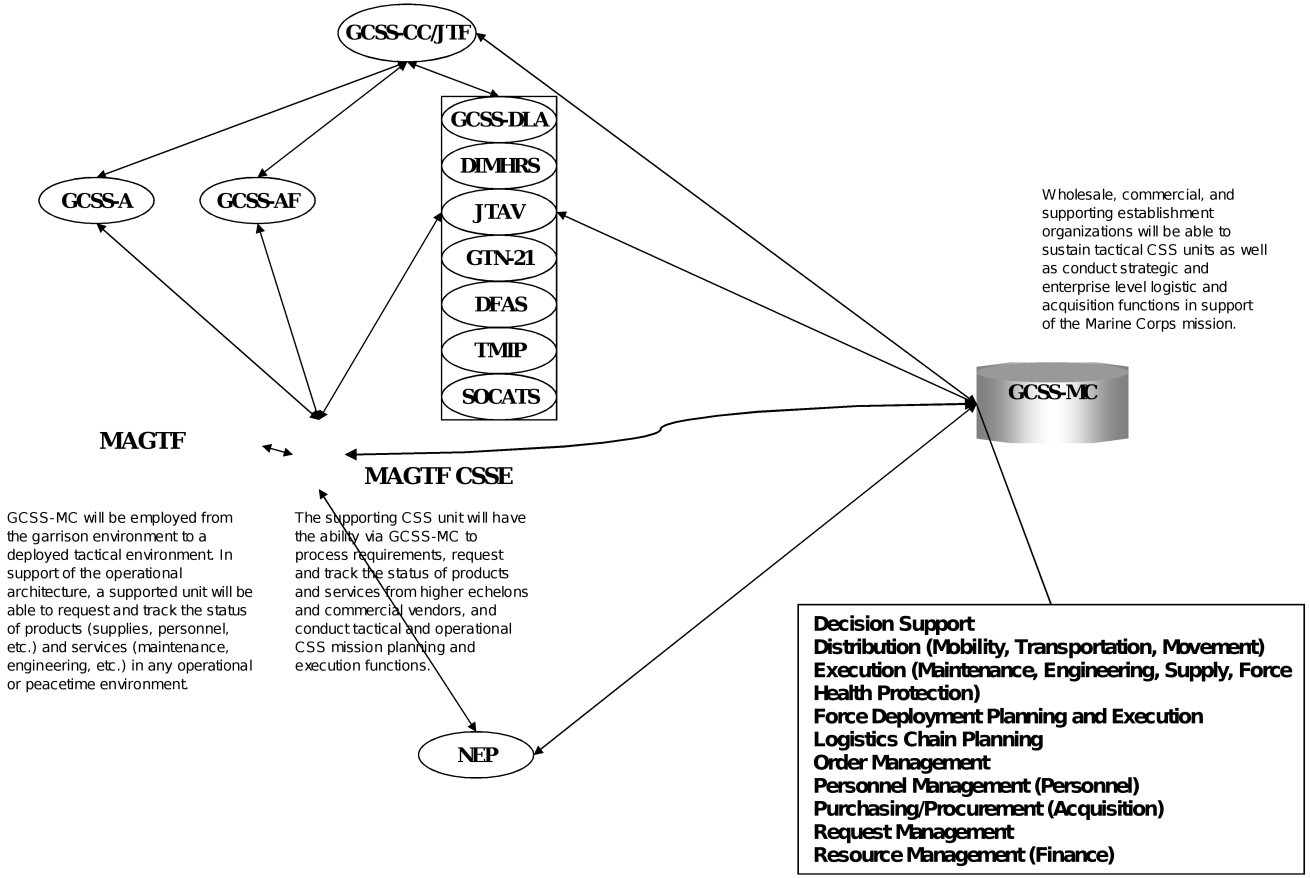
Operational Architecture – OV-1



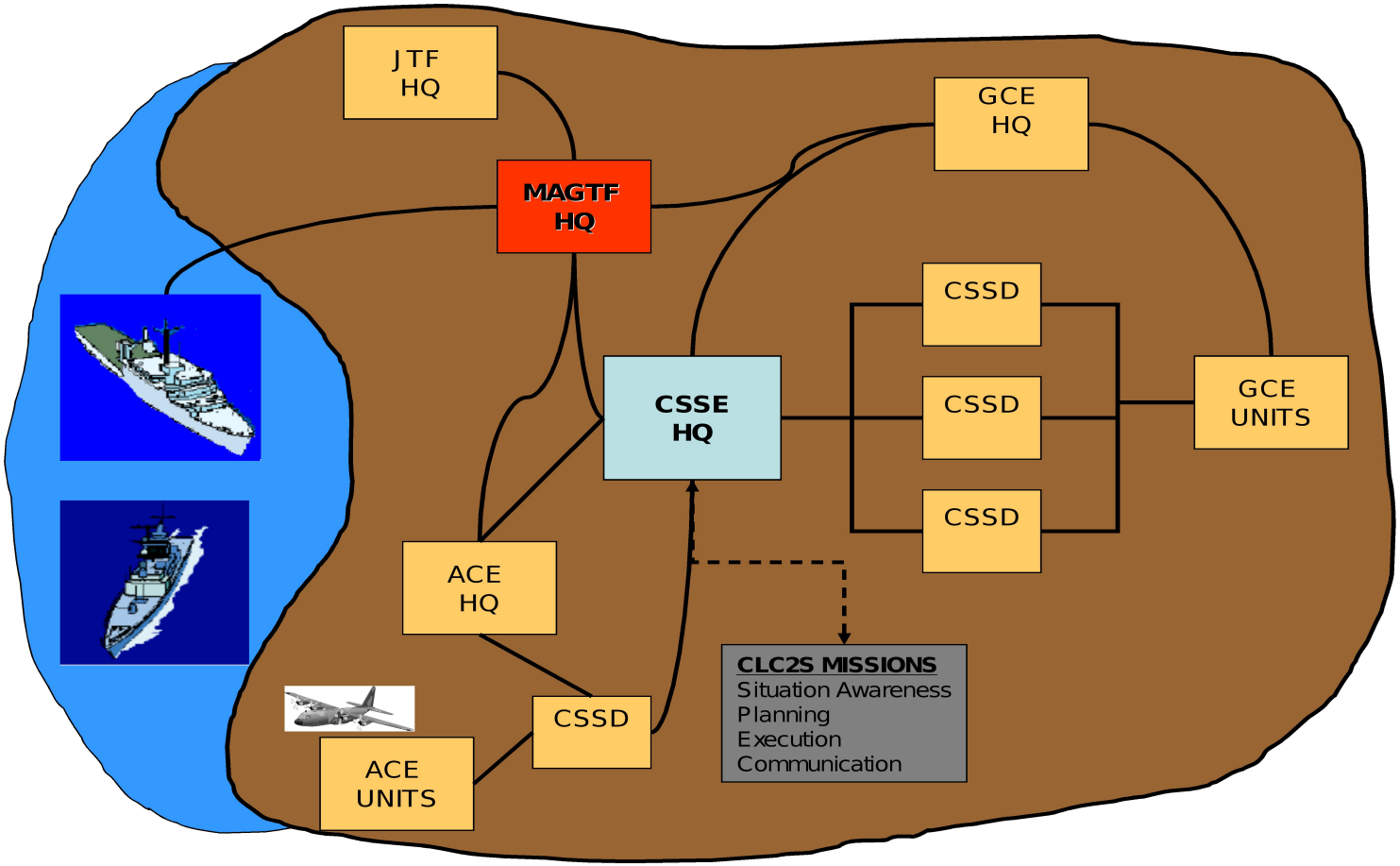
One common process framework with a common language across all Supply Chain functions

GCSS-MC OV-1 from ORD

Figure 1: High Level Operational Concept Diagram (OV-1)

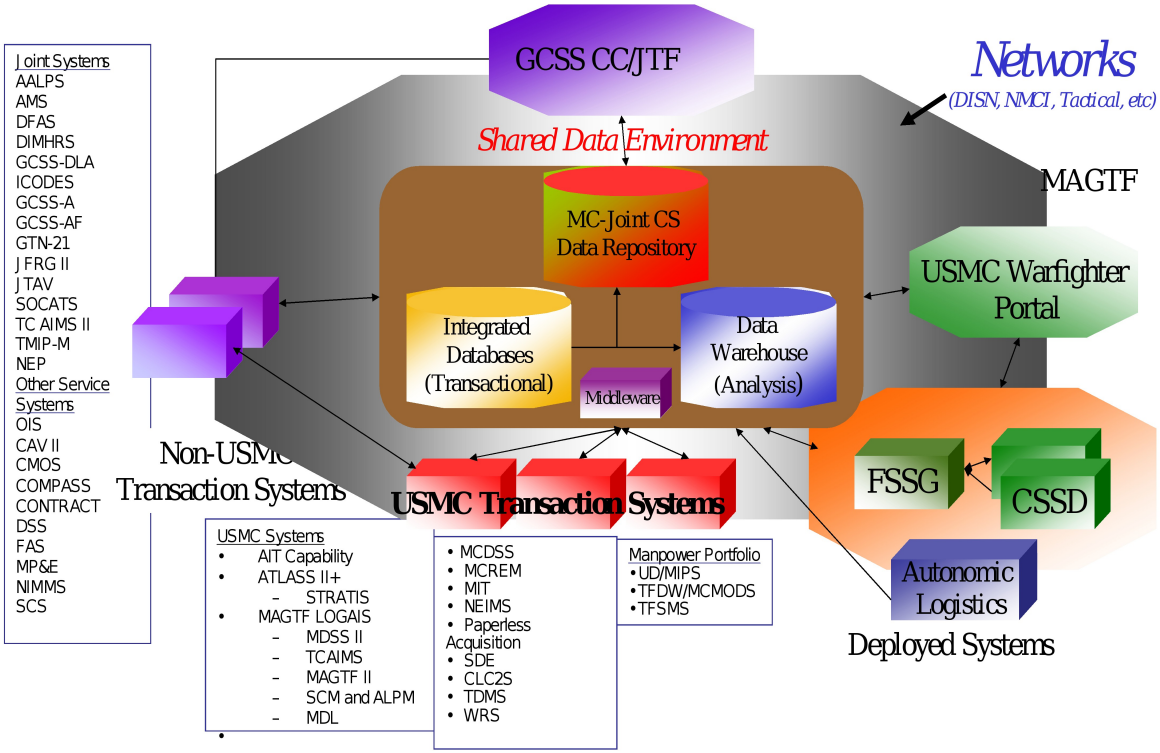

GCSS-CC/JTF
GCSS-DLA
DIMHRS
JTAV
GTN-21
DFAS
TMIP
SOCATS
GCSS-A
GCSS-AF
Wholesale, commercial, and supporting establishment organizations will be able to sustain tactical CSS units as well as conduct strategic and enterprise level logistic and acquisition functions in support of the Marine Corps mission.
GCSS-MC
MAGTF
MAGTF CSSE
GCSS-MC will be employed from the garrison environment to a deployed tactical environment. In support of the operational architecture, a supported unit will be able to request and track the status of products (supplies, personnel, etc.) and services (maintenance, engineering, etc.) in any operational or peacetime environment.
The supporting CSS unit will have the ability via GCSS-MC to process requirements, request and track the status of products and services from higher echelons and commercial vendors, and conduct tactical and operational CSS mission planning and execution functions.
NEP
Decision Support
Distribution (Mobility, Transportation, Movement)
Execution (Maintenance, Engineering, Supply, Force Health Protection)
Force Deployment Planning and Execution
Logistics Chain Planning
Order Management
Personnel Management (Personnel)
Purchasing/Procurement (Acquisition)
Request Management
Resource Management (Finance)

CLC2S OV-1


JTF HQ
GCE HQ
MAGTF HQ
CSSD
CSSE HQ
CSSD
GCE UNITS
CSSD
ACE HQ
CLC2S MISSIONS
Situation Awareness
Planning
Execution
Communication
CSSD
ACE UNITS

GCSS-MC SV-1 (ORD)

Systems Interface Description (SV-1)



Terminology - Mission Acronyms

- *Expeditionary MAGTF Operations (EMO)*
- *SeaBase (SBS)*
- *Shipboard (SPD)*
- *Homeland Security (HSY)*
- *Domestic Exercise (DEX)*
- *Expeditionary Exercise (EEX)*
- *Garrison (GAR)*

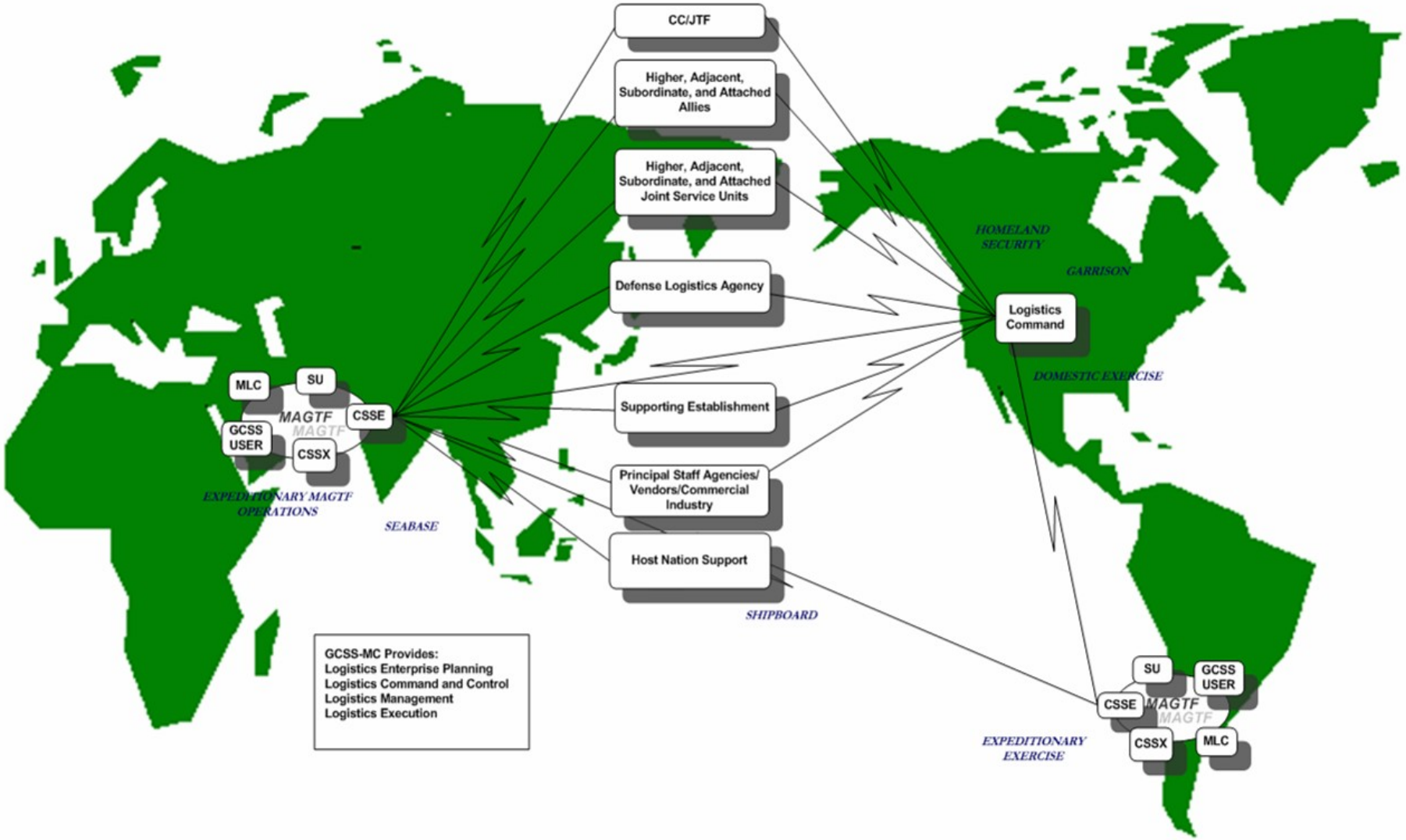
Acronyms

ID	Name
CSSX	Combat Service Support Extension
GCSS USER	GCSS-MC User
SU	Supported Unit
S1	Supplier 1
SN	Supplier N
C2	Command and Control

Extension of S1 execution capability (xPM, xE)
xPM = Production Management
xE = Execution

An organization that provides CSS but is not a part of the Combat Service Support Element and utilizes GCSS-MC to support their tasks. Their functional capabilities include production management and execution of organic CSS assets. These consist of headquarters organizations such as *MEF Headquarters Group, Marine Wing Headquarters Squadrons, Marine Air Wing logistics units such as MWSS and*

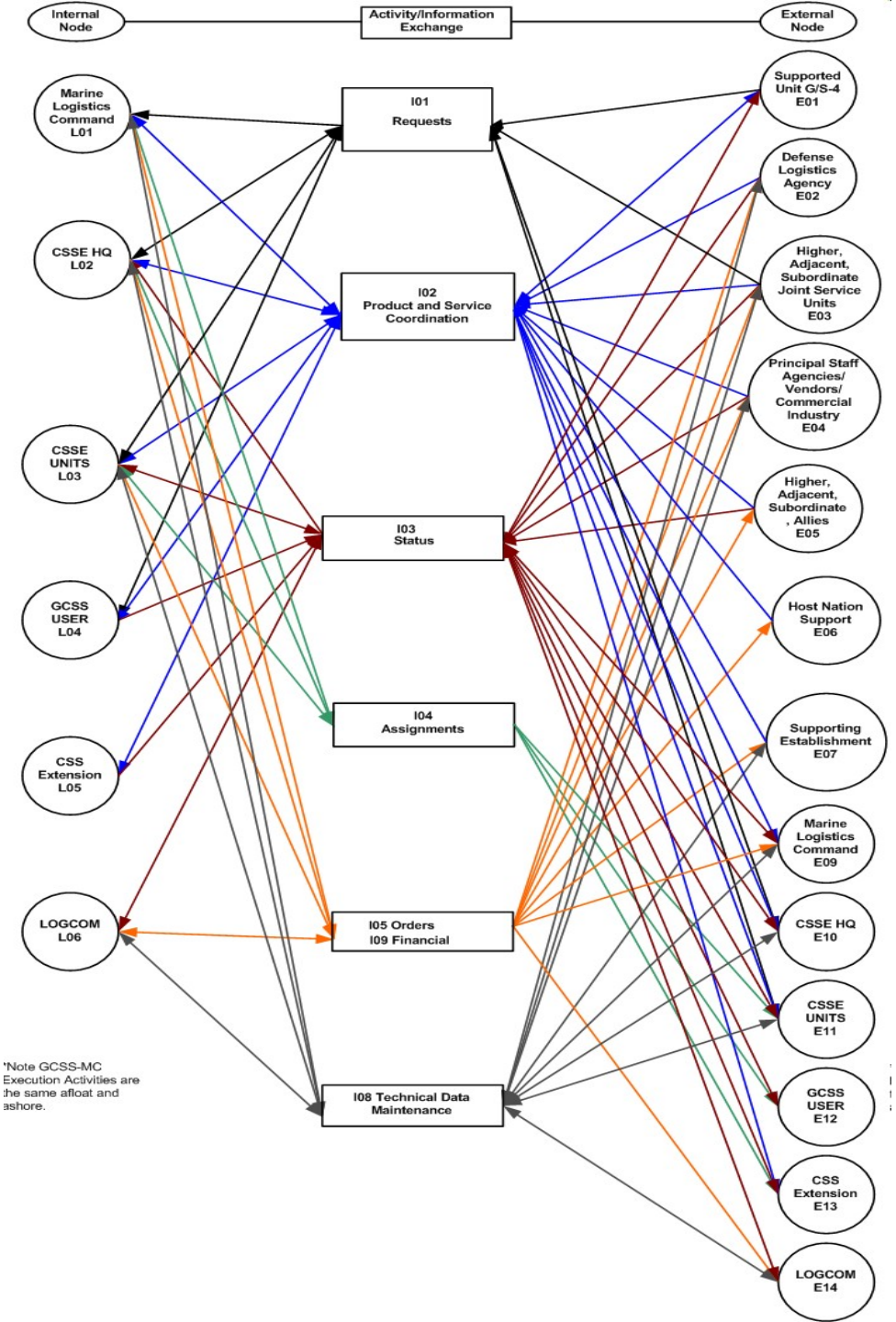
GCSS-MC High Level Operational View OV-1



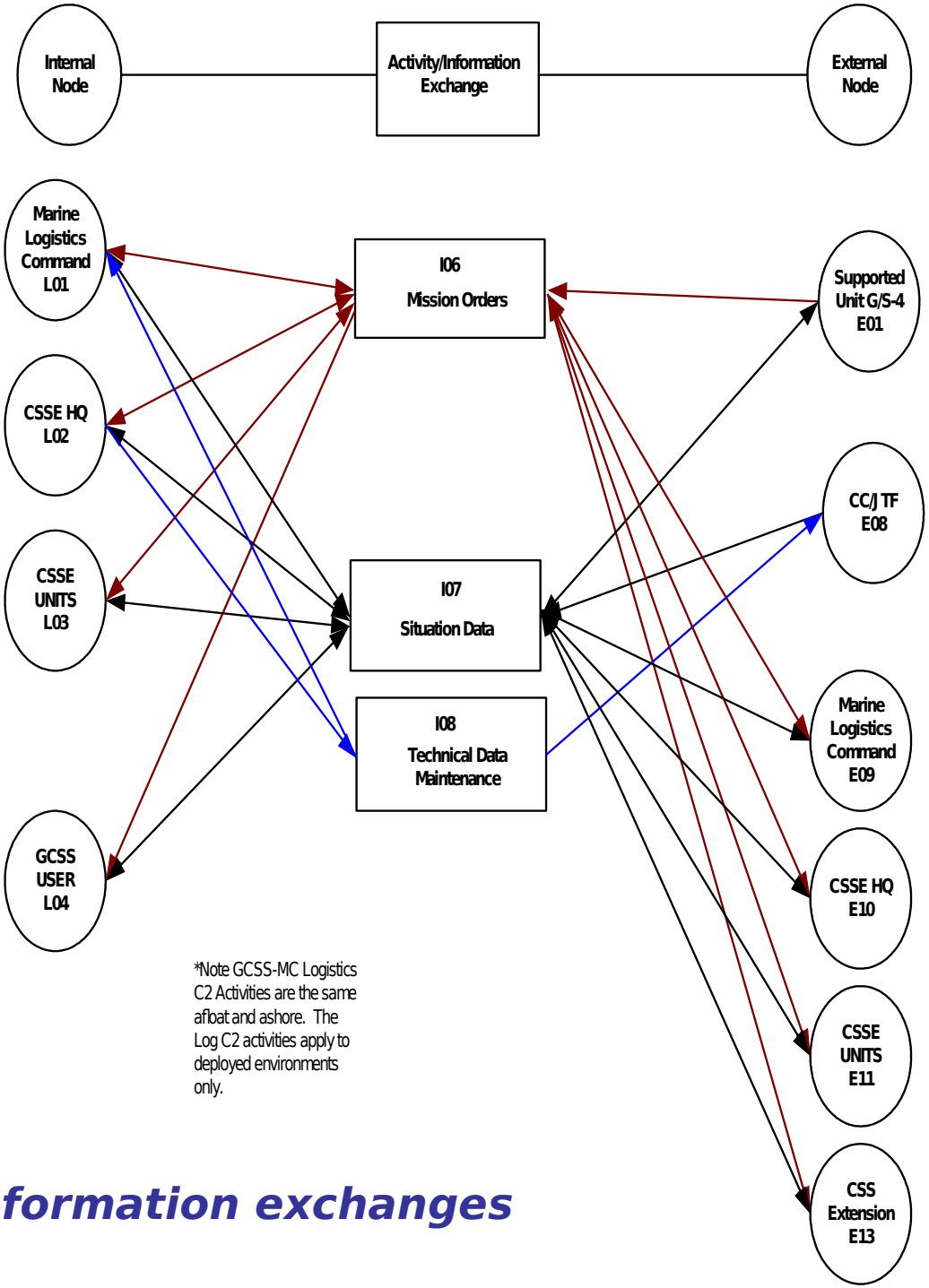
LCM Operational Node Connectivity Description OV-2

Logistics Execution (EMO, HSY, EEX, DEX, SPD, SBS)

Activities and information exchanges



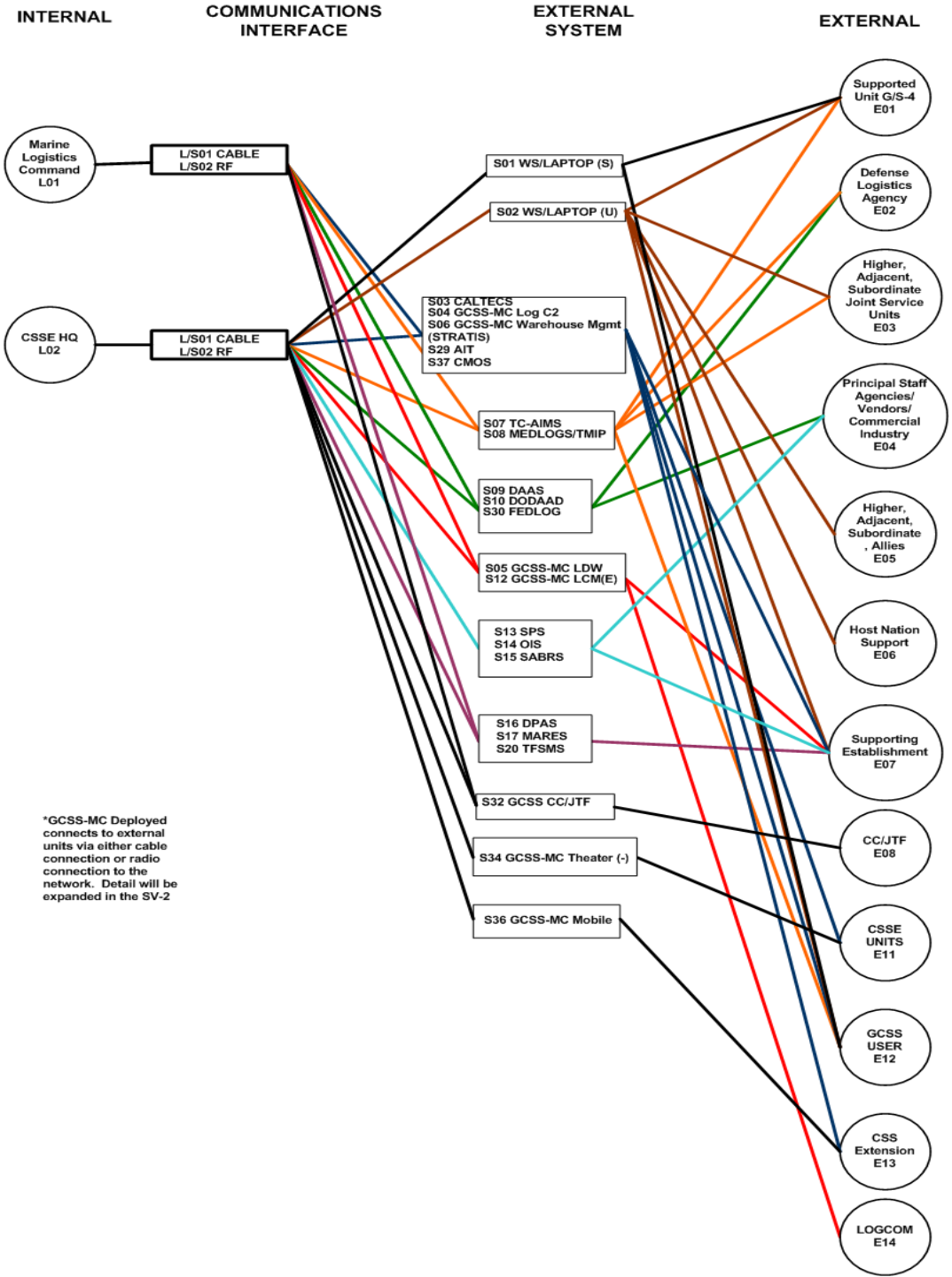
OV-2 Log C2


Internal Node
Activity/Information Exchange
External Node
Marine Logistics Command L01
CSSE HQ L02
CSSE UNITS L03
GCSS USER L04
I06 Mission Orders
I07 Situation Data
I08 Technical Data Maintenance
Supported Unit G/S-4 E01
CC/J TF E08
Marine Logistics Command E09
CSSE HQ E10
CSSE UNITS E11
CSS Extension E13
*Note GCSS-MC Logistics C2 Activities are the same afloat and ashore. The Log C2 activities apply to deployed environments only.

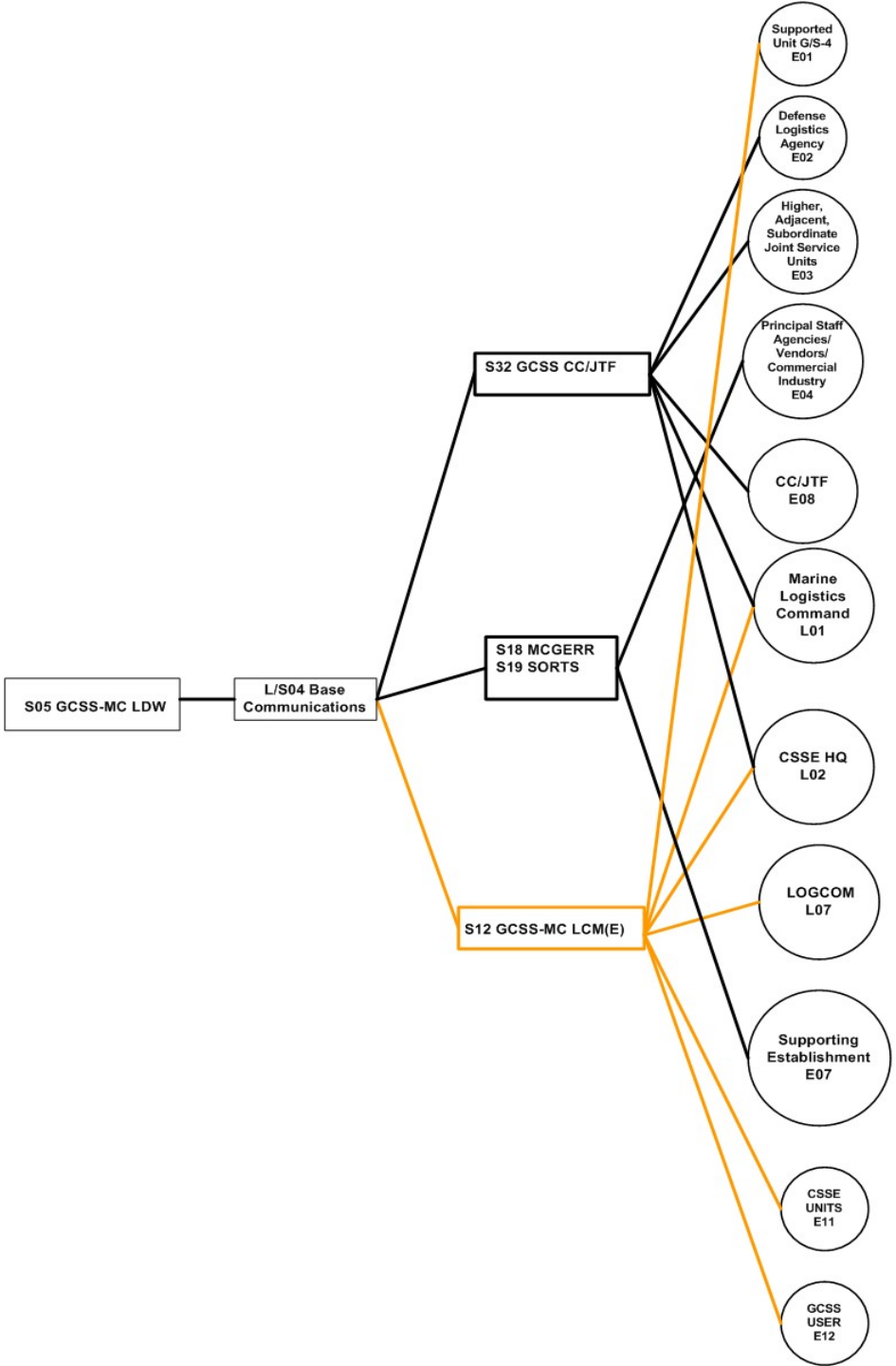
Activities and information exchanges

LCM System Interface Description SV-1 Theater

Supports FSSG HQ and M

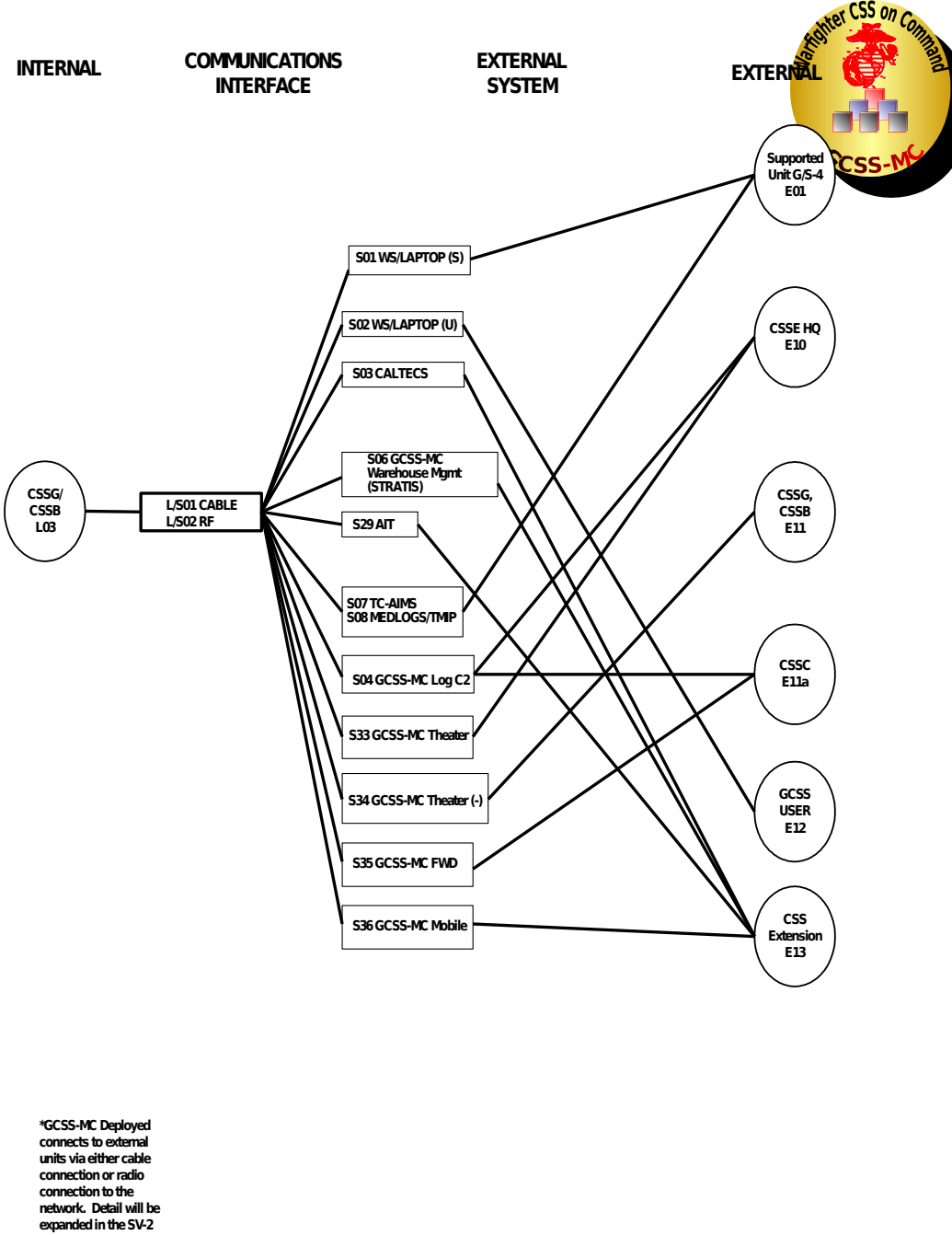


GCSS-MC
SV-1 LDW



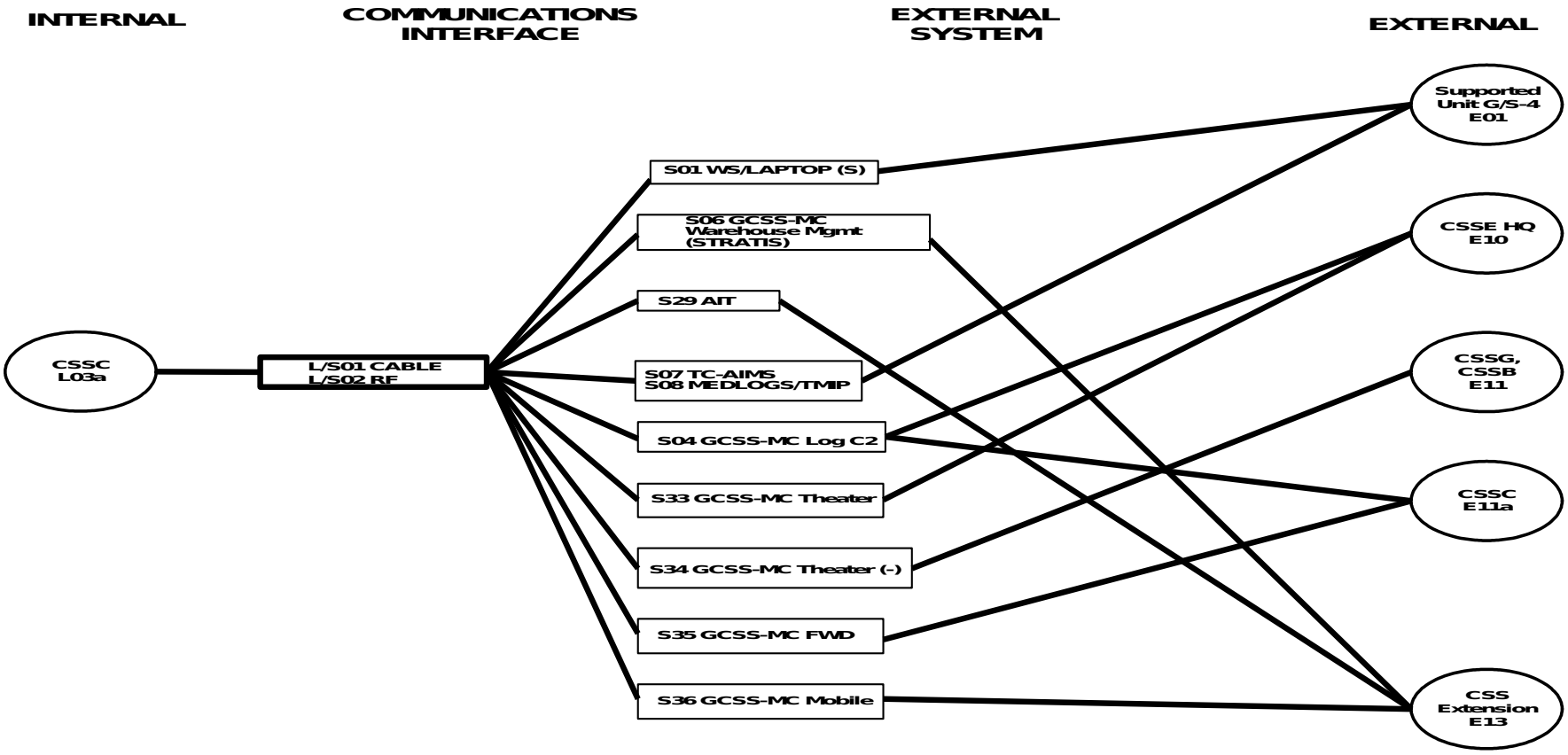
LCM SV-1 Theater (-)

Supports CSSG and CSSB sized Organizations



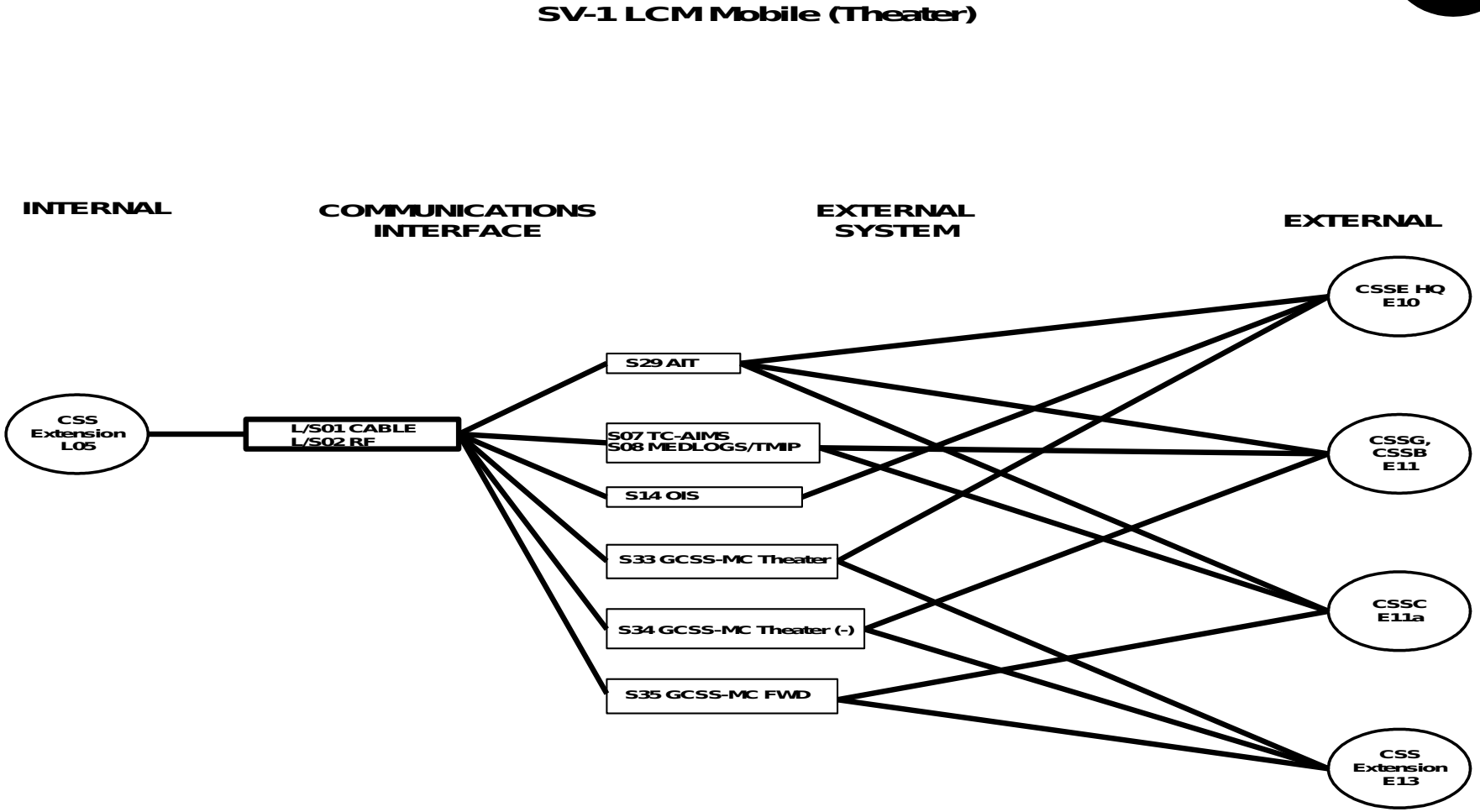
*GCSS-MC Deployed connects to external units via either cable connection or radio connection to the network. Detail will be expanded in the SV-2

LCM SV-1 Theater (FWD)



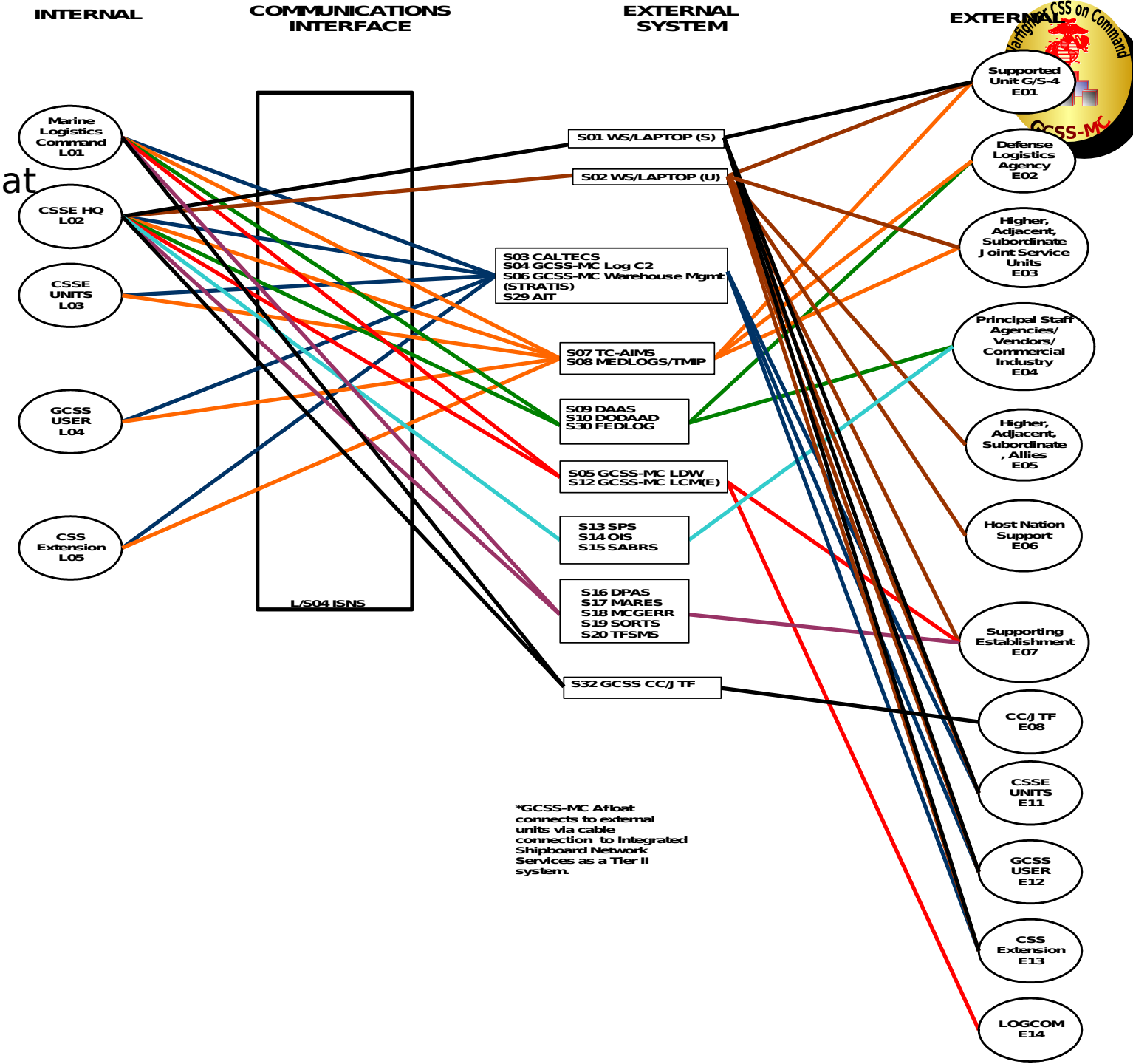
*GCSS-MC Deployed connects to external units via either cable connection or radio connection to the network. Detail will be expanded in the SV-2

LCM SV-1 Mobile (Theater)

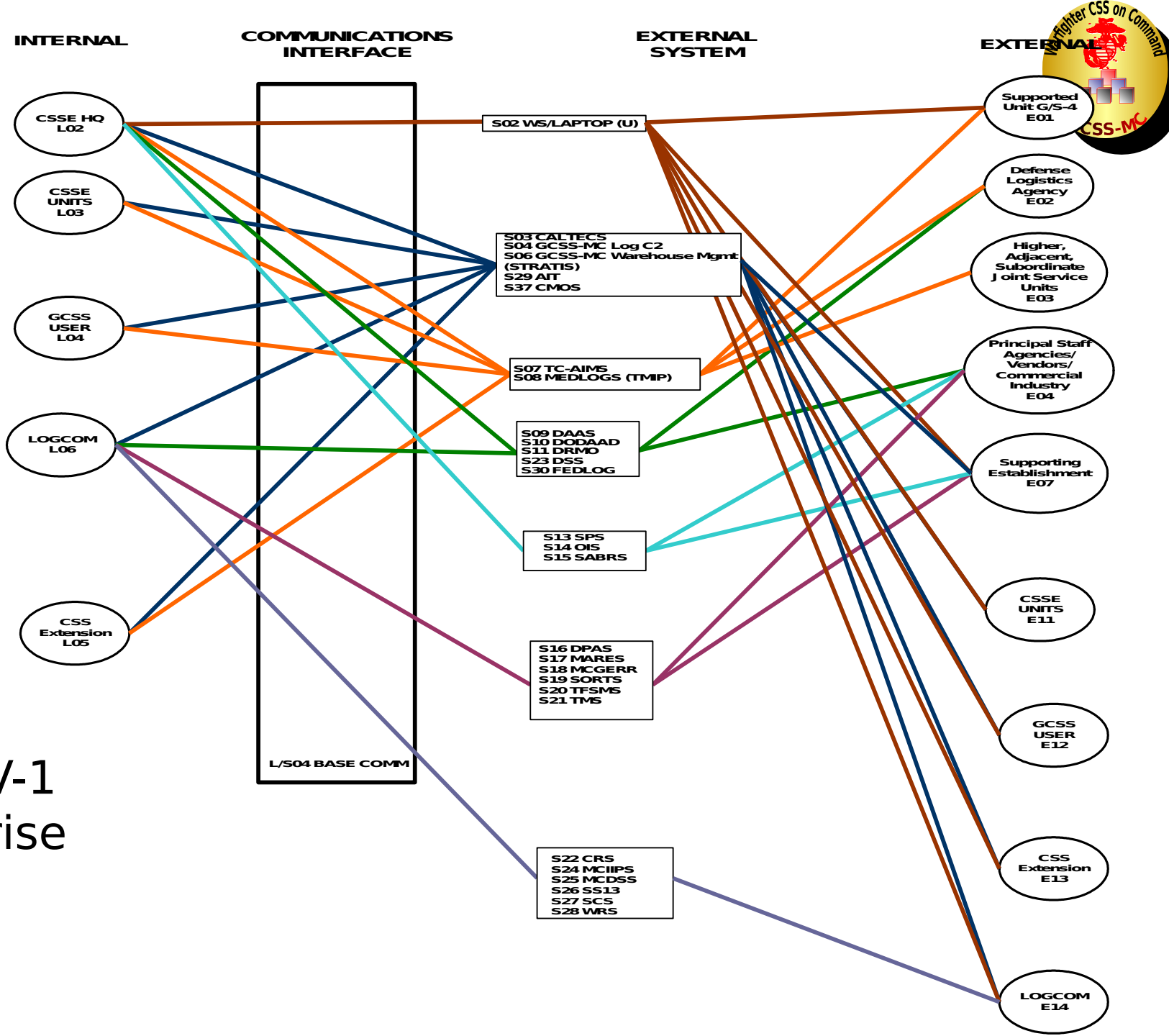


*GCSS-MC Deployed connects to external units via either cable connection or radio connection to the network. Detail will be expanded in the SV-2

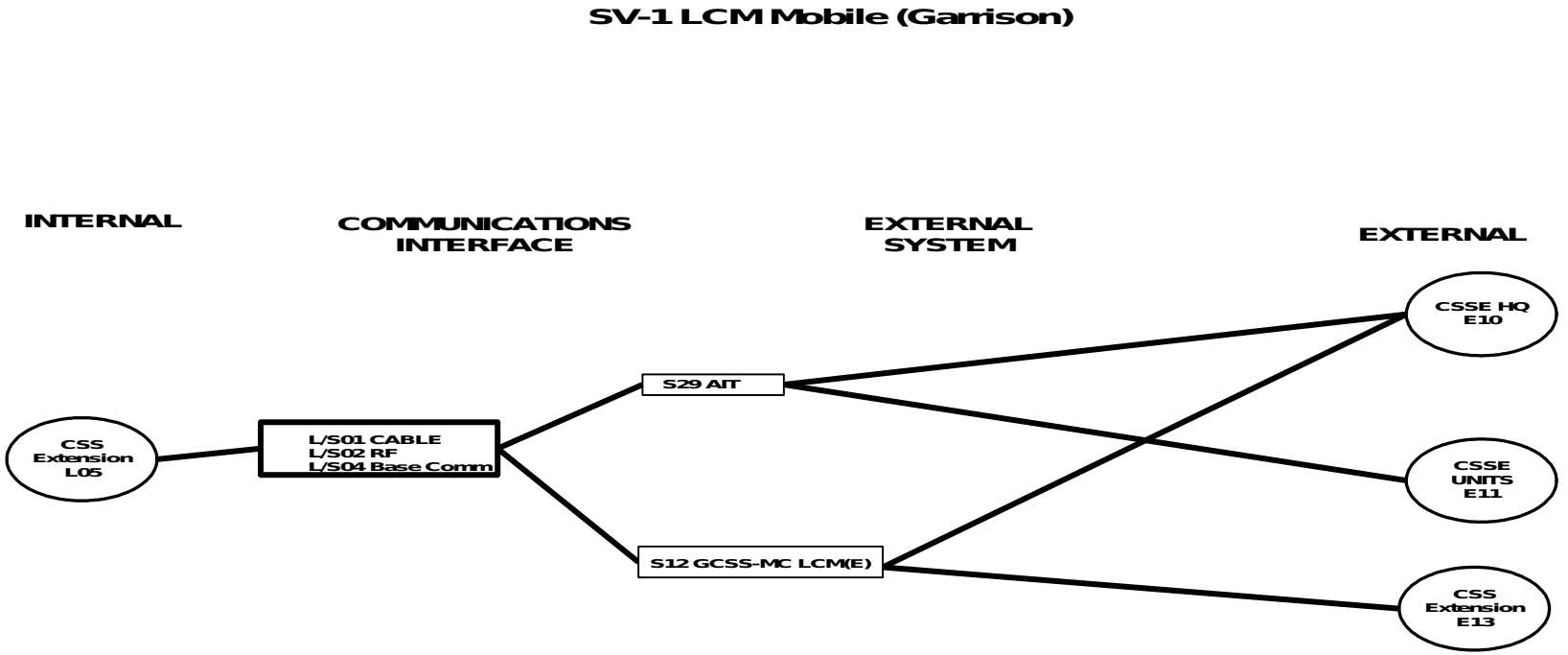
LCM SV-1 Afloat (SPD, SBS)



LCM SV-1 Enterprise

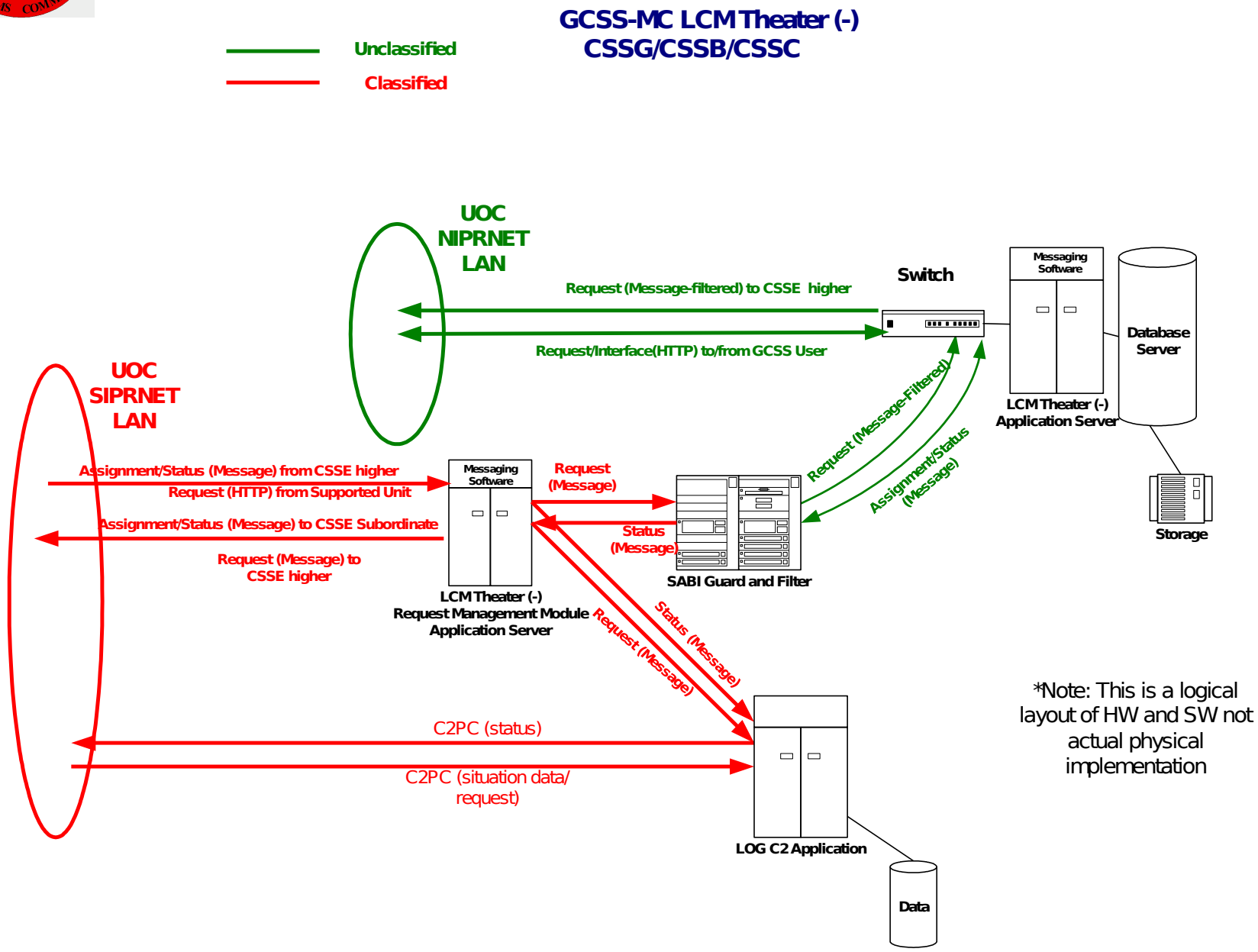


SV-1 LCM Mobile (Garrison)



*GCSS-MC Deployed connects to external units via either cable connection or radio connection to the network. Detail will be expanded in the SV-2

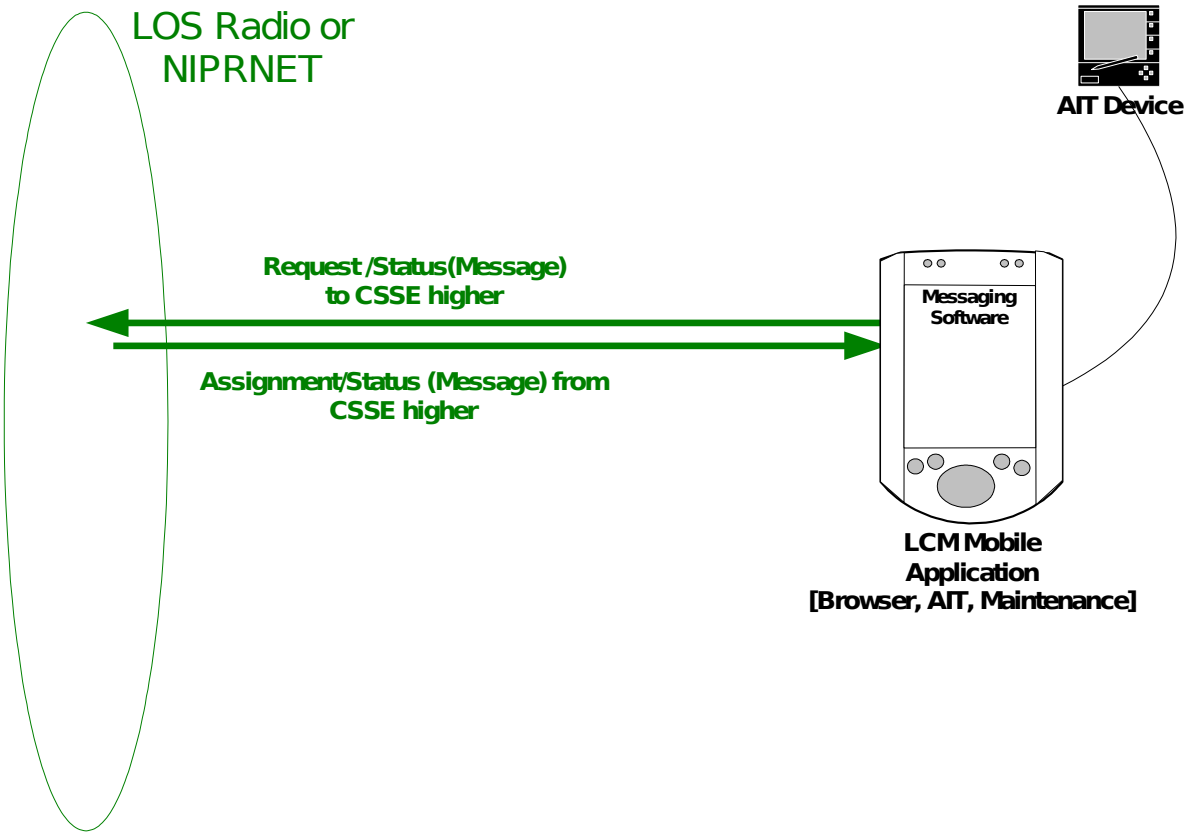
GCSS-MC LCM Theater (-)



GCSS-MC LCM Mobile (Garrison)

Unclassified

GCSS-MC LCM Mobile (CSS Extension in Garrison Environment)



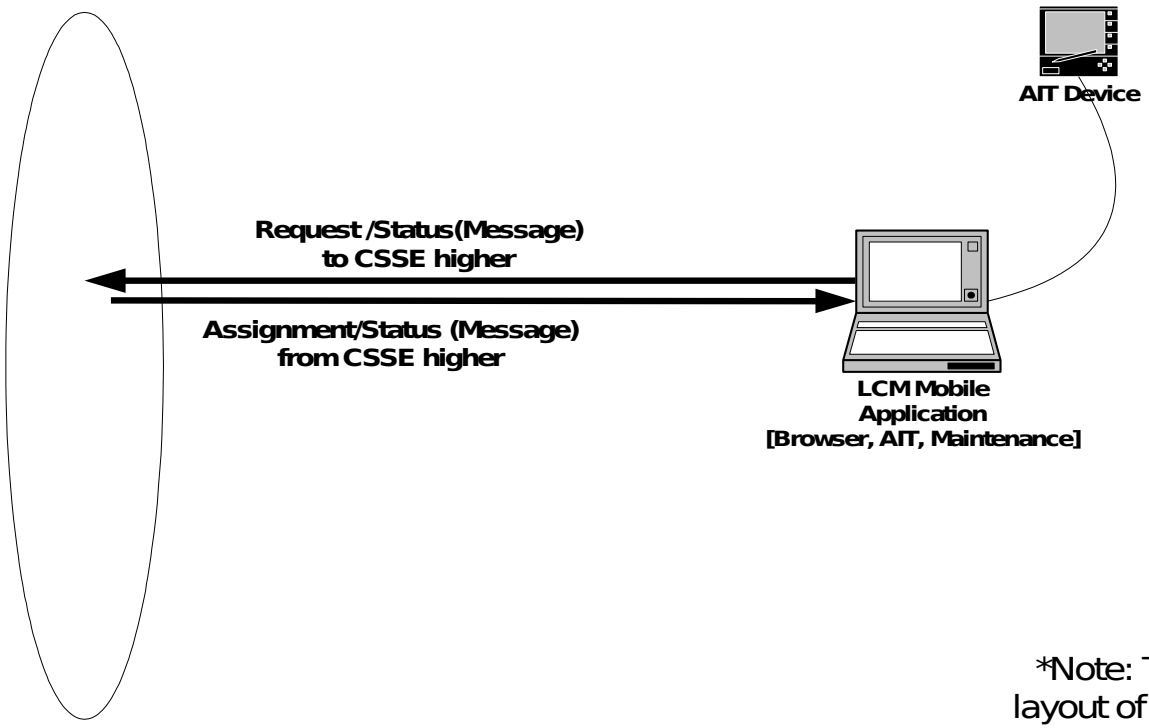
GCSS-MC LCM Mobile

Classified or Unclassified depending on situation

GCSS-MC LCM Mobile (CSS Extension and mobile GCSS Users)

Used by Separate Battalions, Convoys, MCT, etc

LOS Radio to SIPRNET/ NIPRNET or SERIAL/ USB to GCSS-MC Theater HW


AIT Device
Request /Status(Message) to CSSE higher
Assignment/Status (Message) from CSSE higher
LCM Mobile Application [Browser, AIT, Maintenance]

*Note: This is a logical layout of HW and SW not actual physical implementation

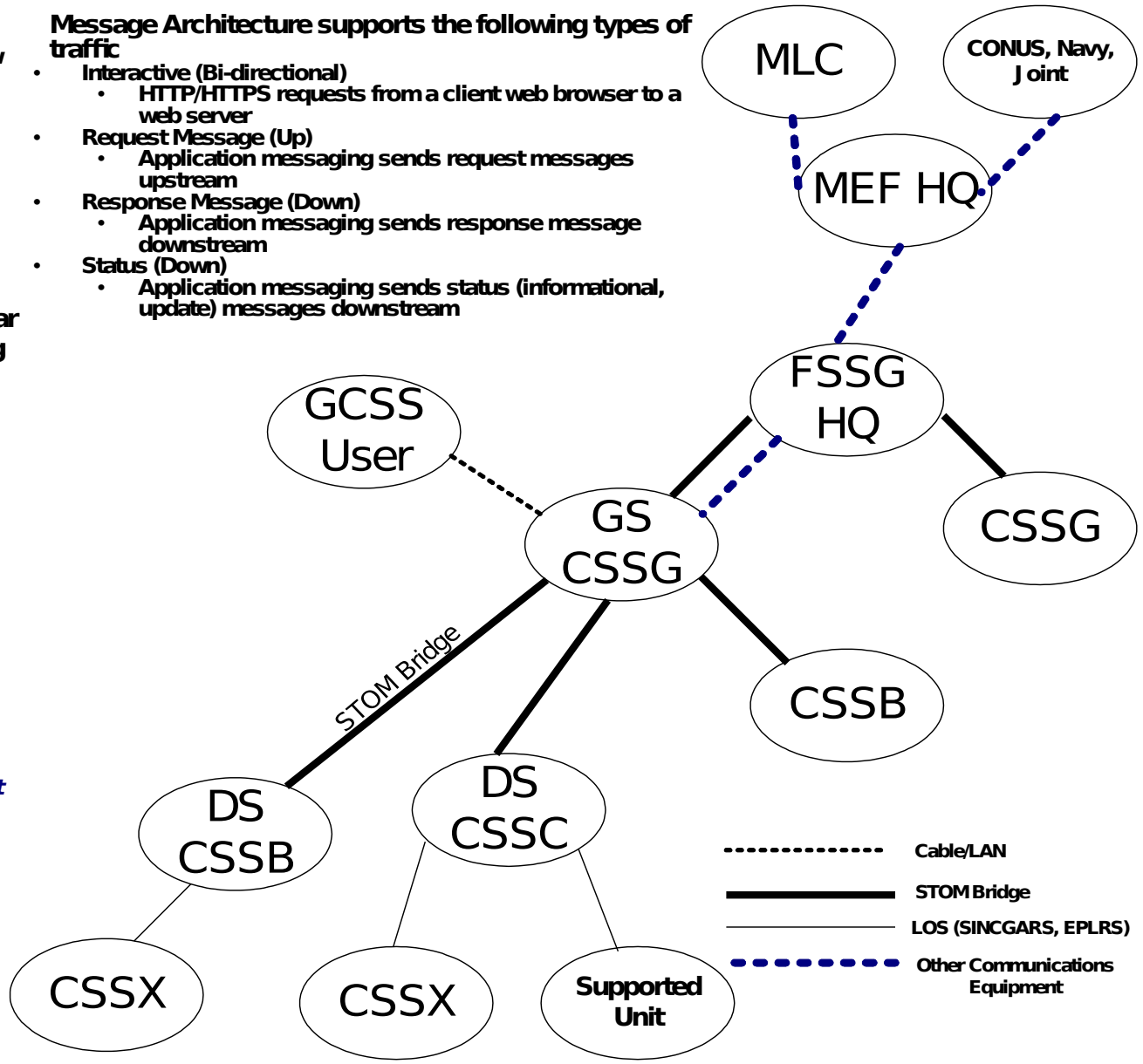
GCSS-MC Communications Architecture
(Deployed)

Note: This diagram describes physical flow of data on the operational battlefield not logical/functional flow.

- Minimizes synch
- Increased Capacity
- More robust than star
- Requires messaging software

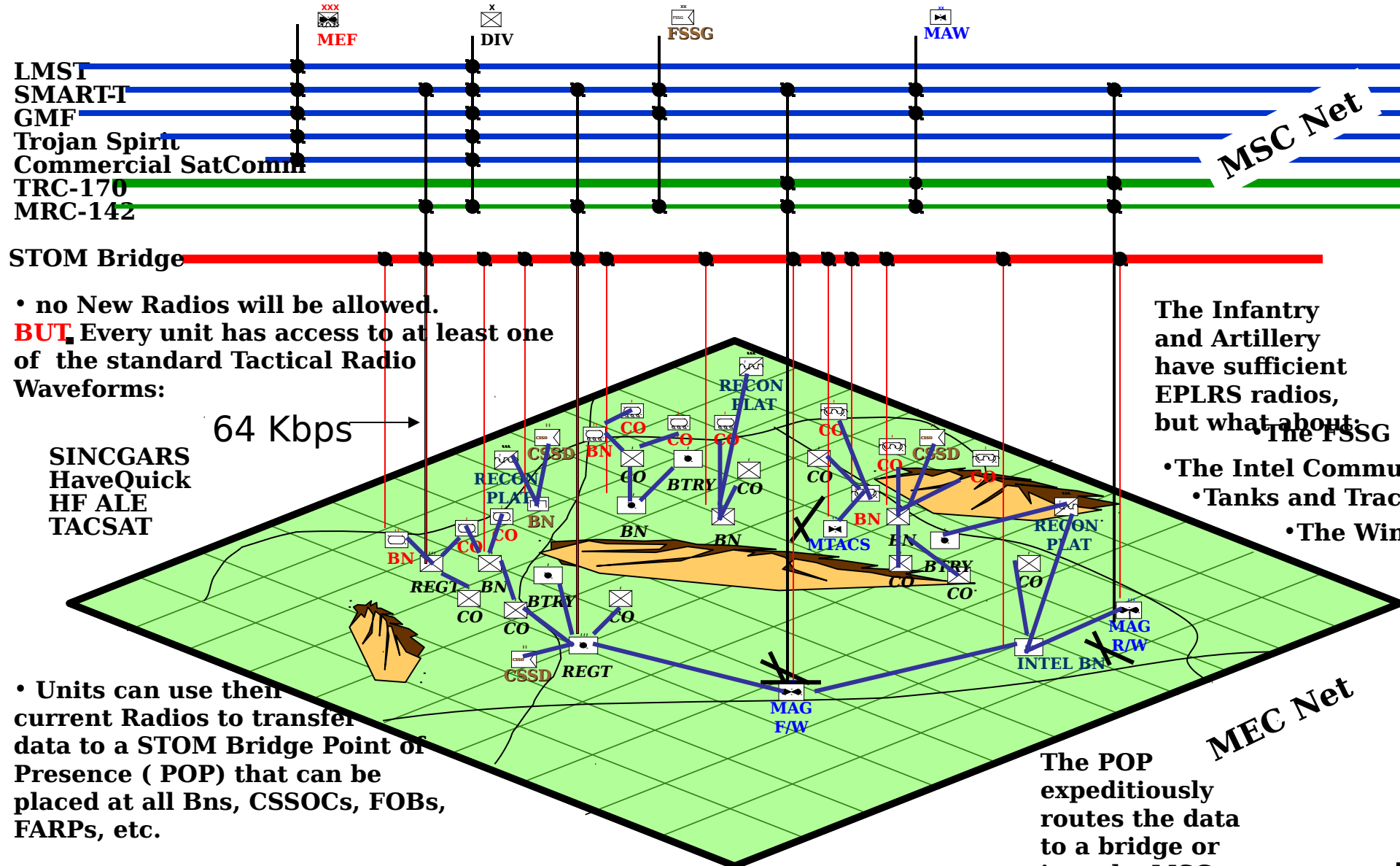
Message Architecture supports the following types of traffic

- Interactive (Bi-directional)
  - HTTP/HTTPS requests from a client web browser to a web server
- Request Message (Up)
  - Application messaging sends request messages upstream
- Response Message (Down)
  - Application messaging sends response message downstream
- Status (Down)
  - Application messaging sends status (informational, update) messages downstream



STOM Bridge Requirement equivalent to two (2) Points of Presence (POP) per CSSE UOC Capability Set IV instance. GCSS-MC requires 110 POP

STOM Bridge



• no New Radios will be allowed.
BUT, Every unit has access to at least one of the standard Tactical Radio Waveforms:

The Infantry and Artillery have sufficient EPLRS radios, but what about:

- The FSSG
- The Intel Commu
- Tanks and Trac
- The Win

• Units can use their current Radios to transfer data to a STOM Bridge Point of Presence (POP) that can be placed at all Bns, CSSOCs, FOBs, FARPs, etc.

The POP expeditiously routes the data to a bridge or